Supreme Court, U.S.
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No. 06-981

In The

Supreme Court Of The United States

DAVID PRENTICE
Petitioner,

v.

DALCO ELECTRIC, INC.
Respondent.

ON PETITION FOR WRIT OF CERTIORARI
TO THE SUPREME COURT OF CONNECTICUT

PETITION FOR WRIT OF CERTIORARI

Attorneys For The Petitioner:

* JURI E. TAALMAN
Brignole, Bush & Lewis
73 Wadsworth Street
Hartford, CT 06106
(860) 527-9973

TIMOTHY BRIGNOLE
Brignole, Bush & Lewis
73 Wadsworth Street
Hartford, CT 06106
(860) 527-9973

* *Counsel of Record*

QUESTIONS PRESENTED FOR REVIEW

1. Whether the Supreme Court of Connecticut failed properly to apply the standard for determination of and admissibility for scientific evidence established in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed.2d 469 (1993) ("Daubert"), when it ruled that the opinion of an expert, based on his own experience, that prevailing wind conditions could not have overturned a ladder if the ladder was set up properly and free from defects, was scientific evidence that required a reliability and validity assessment in order to be admissible at a personal injury trial, although the expert's opinion was supported by other evidence and was tested on cross-examination.

2. Whether the Supreme Court of Connecticut failed properly to apply the Daubert standard in ruling that the trial court abused its discretion in determining that the expert's opinion was not scientific evidence and did not require a hearing to determine its reliability and validity on standards established by the Supreme Court of Connecticut in State v. Porter, 241 Conn. 57, 698 A.2d 739 (1997).

PARTIES TO THE PROCEEDING

Petitioner, David Prentice, is a resident of Hartford, Hartford County, Connecticut. Petitioner was the Plaintiff in the proceeding in the Superior Court for the judicial district of Hartford, at Hartford and was the Appellee before the Supreme Court of Connecticut.

Respondent, Dalco Electric, Inc. is a corporation organized and existing under the laws of the State of Connecticut, with an office and principal place of business in Hartford, Connecticut, and was the Defendant in the proceeding in the Superior Court for the judicial district of Hartford, at Hartford and the Appellant before the Supreme Court of Connecticut.

Respondent Dalco Electric, Inc. appealed from the judgment of the trial court to the Appellate Court of Connecticut. The Supreme Court of Connecticut then transferred the appeal to itself, pursuant to Connecticut General Statutes Sec. 51-199(c) and Connecticut Practice Book Sec. 65-1.

There are no other parties to this action.

125 Research LLC, is a Connecticut limited liability corporation, which was a Defendant in the proceedings before the Superior Court for the judicial district of Hartford at Hartford and owned the building where Dalco Electric, Inc. operated its business. After the trial, the jury returned a verdict in favor of the Defendant 125 Research LLC. Petitioner David Prentice did not appeal from the judgment rendered on said verdict and, accordingly, 125 Research LLC

was not a party to the Appeal before the Supreme Court of Connecticut and is not a party to this action.

TABLE OF CONTENTS

Page

Questions Presented for Review i

Parties to Proceeding ii

Table of Contents iv

Table of Authorities vi

Opinion and Orders Below 1

Statement of Jurisdiction 2

Constitutional and Statutory Provisions 2

Statement of Case 2

Reasons for Granting Writ

I. The Supreme Court of Connecticut failed properly to apply the standard for determination of and admissibility for scientific evidence established in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed.2d 469 (1993) ("Daubert"), when it ruled that the opinion of an expert, based on his own experience, that prevailing wind conditions could not have overturned a ladder if the ladder was set up properly and free from defects, was scientific evidence that required a reliability and validity assessment in order to be admissible at a personal injury trial, although the expert's opinion

was supported by other evidence and was tested on cross-examination. 8

II. The Supreme Court of Connecticut failed properly to apply the Daubert standard in ruling that the trial court abused its discretion in determining that the expert's opinion was not scientific evidence and did not require a hearing to determine its reliability and validity 19

Conclusion 27

Appendix A1

A. Opinion of the Connecticut Supreme Court . . . A2

B. Memorandum of Decision (Frazzini, J.) Defendant's Motion to Set Aside Verdict A32

TABLE OF AUTHORITIES

Page

CASES

Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993).....8, 9, 10, 11, 18, 21, 23, 25

Frye v. United States, 293 F.1013 (D.C.Cir. 1923).....12

Hayes v. Decker, 263 Conn. 677, 683, 822 A.2d 228 (2003).....12, 19, 20, 21, 23, 24

Maher v. Quest Diagnostics, 269 Conn. 154, 847 A.2d 978 (2004).....11, 13, 15, 16, 17, 18, 23, 25

Message Center Management v. Shell Oil Product, 85 Conn. App. 401, 422, fn. 12 (2004) 11

State v. Borrelli, 227 Conn. 153, 163, 629 A.2d 1105 .....9, 17, 18

State v. Dehaney, 261 Conn. 336, 358, 803 A2d 267 (2002),

cert. denied, 537 U.S. 1217,
123 S.Ct. 1318, 154 L.Ed.2d 1070
(2003) 20, 21

State v. Grifin, 273 Conn. 266, 276,
869 A2d 640 (2005) 8,12

State v. Hasan, 205 Conn. 485, 489,
534 A.2d 877 (1987)..... 9, 17, 18

State v. Kirsh, 263 Conn. 390, 399,
820 A.2d 236 (2003).....16

State v. Perkins, 271 conn. 218, 252,
856 A.2d 917 (2004).....16

State v. Porter, 241 Conn. 57,
698 A.2d 739 (1997) certiorari denied,
523 U.S. 1058, 118 S. Ct. 1384,
140 L.Ed. 2d 645 (1998).....9, 10, 22

State v. Reid, 254 Conn. 546,
757 A.2d 482 (2000) 8, 17, 18, 23

State v. Vega, 259 Conn. 374, 392,
788 A.2d 1221, cert. denied,
537 U.S. 836, 123 S. Ct. 152,
154 L. Ed. 2d 56 (2002) 20

STATUTES

Conn. Code Evid. § 7-2 12

IN THE
SUPREME COURT OF THE UNITED STATES

DAVID PRENTICE
Petitioner

v.

DALCO ELECTRIC, INC.
Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE SUPREME COURT OF CONNECTICUT

The Petitioner, David Prentice, respectfully requests that a writ of certiorari issue to review the judgment and opinion of the Supreme Court of the State of Connecticut in David Prentice v. Dalco Electric, Inc. entered in this case on October 17, 2006

OPINION AND ORDERS BELOW

The opinion of the Supreme Court of Connecticut No. 17444, entered on October 17, 2006, reversing the judgment of the Superior Court for the judicial district of Hartford at Hartford No. CV 01027625, and remanding the case for a new trial. The opinion of the Supreme Court of the State of Connecticut is reported at 280 Conn. 336, 907 A.2d 1204 (2006), and is reprinted in the Appendix hereto at App. 1A.

The Superior Court of Connecticut, judicial district of Hartford at Hartford, Memorandum of Decision (Frazzini, J.) was issued on February 17, 2005, and is unofficially reported at 2005 WL 602569 (Conn. Super. 2005), and reprinted at App. 18A.

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STATEMENT OF JURISDICTION

On October 17, 2006, the Supreme Court of Connecticut issued a Memorandum of Decision reversing the judgment of the Superior Court and remanding the case for a new trial based on its interpretation of Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed.2d 469 (1993).This Court has jurisdiction based on 28 U.S.C. Section 1257 and 28 U.S.C. 1254 (1).

The Petitioner is relying upon Rule 10 (b) and (c)of the Rules of the Supreme Court of the United States in filing this petition.

The jurisdiction of this Court is invoked under Title 28, United States Code, Section 1257 and 1254 (1) ("Cases in the highest court of a State may be reviewed by the following methods: (1) By writ of certiorari granted upon the petition of any party to any civil or criminal case)

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CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED

1. Constitutional Provisions

a. Constitution of the United States Amendment V:

> "No person shall be ...deprived of life, liberty, or property without due process of law"

b. Constitution of the United States, Amendment XIV:

> Section 1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges and immunities of citizens of the United States; nor shall any State deprive any person of life, liberty or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

2. Statutes

a. Federal

28 U.S.C. Sec. 1257

(a) Final judgments or decrees rendered by the highest court of a State in which a decision could be had may be reviewed by the Supreme Court by writ of certiorari where the validity of a treaty or statute of the United States is drawn in question or where the validity of a statute of any State is drawn in question on the ground of its being repugnant to the Constitution treaties or laws of the United

States , or where any title, right, privilege or immunity is specially set up or claimed under the Constitution or the treaties or statutes of , or any commission held or authority exercised under, the United States

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STATEMENT OF THE CASE

The plaintiff brought this personal injury action against the defendant alleging negligence. Prior to trial, the plaintiff identified Mervin Strauss, a professional forensic engineer and accident reconstruction expert, who was admitted by the court as plaintiff's expert witness. The defendant filed a motion in limine seeking to preclude Strauss' testimony and requested a *Porter [Daubert]* hearing. The trial court declined to rule on this motion prior to trial and, over the defendant's objections, allowed Strauss' expert testimony to be entered into evidence. The jury returned a verdict for the plaintiff awarding the plaintiff $1.2 million in damages. Subsequently, the defendant filed a motion to set aside the jury's verdict. Following extensive pos-trial hearings, the trial court concluded that Strauss' testimony was admissible and did not constitute scientific evidence that required a validity assessment under *Porter*. Accordingly, the trial court denied the defendant's motion to set aside the jury's verdict and rendered judgment thereon. This appeal followed.

The jury could reasonably have found the following facts:

Plaintiff, David Prentice and Benedict Gagliardi, Jr., his partner at B.G. Graphics, Inc. had been hired by the defendant, Dalco Electric, Inc. to instal a sign on the front of

its building in Meriden, Connecticut. Although Gagliardi and the plaintiff had decided to take measurements only, and to install the defendant's sign on another day, Luft, a part owner of the defendant, located a second extension ladder in one of the defendant's storage areas and, with the assistance of one of his employees, brought it to the front of the building where the sign was to be installed. Luft leaned the second ladder against the side of the building approximately eight to ten feet to the left of where the plaintiff had positioned the first ladder. The plaintiff informed Luft that he and Gagliardi would not use the second ladder because it was in poor condition and because they were only taking measurements, which did not require multiple people or ladders to complete. In particular, the plaintiff noticed that the second ladder was missing braces required for stability and that someone had tried to repair it by bolting pieces of iron to the bottom of the ladder's legs. A5-A6

The second ladder was subsequently fully extended to the roof of the building. Although the record is not clear as to who fully extended the second ladder and completed its set up, both the plaintiff and Gagliardi testified that they never touched the second ladder and had observed only Luft and his employees handle it. A6

The plaintiff fully extended the first ladder, resting the top edge of the ladder against the aluminum edge of the building's roof. Plaintiff then climbed approximately ten feet up the first ladder in order to take the necessary measurements for the sign's future installation. As the plaintiff was completing his work on the first ladder, the second ladder, which was approximately ten feet to the left of where the plaintiff was working, fell to the right, sliding along the edge

of the defendant's roof and struck the ladder on which the plaintiff was standing, causing the plaintiff to fall to the ground and to sustain serious injuries. No one was standing on or touching the second ladder when it fell and collided with the plaintiff. A6

Evidence was produced at trial to show that on the day of the incident, Meriden and the surrounding area experienced winds of 11.5 to 18 miles per hour. The safety label on the ladder that collided with the plaintiff stated that it should not be used in high wind. A meteorologist testified that a high wind warning occurs when winds exceed 39 miles per hour, and a high wind advisory occurs when a sustained wind exceeds 45 miles per hour. Neither a high wind advisory or a high wind warning had been issued for Meriden on the day the plaintiff was injured. Plaintiff's expert, Mervin Strauss, testified as a forensic engineer and as an accident reconstruction expert, that it was not possible for wind conditions of 11.5 to 18.0 miles per hour to have overturned a ladder that was properly set up and free from defects. He based this on his years of experience as an engineer and accident construction expert in investigating more than a dozen ladder accident cases. However, since none of defendant's employees who set up the second ladder could be identified, the manner in which the second ladder had been set up, its position and angle relative to the ground and the building, and the topography of the ground on which it rested, could not be determined. Strauss testified that without knowing how and exactly where the ladder was set up, it was not possible to determine whether the defect in the ladder, the ladder set up, or the wind, or all three (3) factors together or in various combinations caused the ladder to fall over and strike the ladder being used by the plaintiff. A meteorologist,

Robert Cox, also testifying as plaintiff's expert, stated that "most people wouldn't really even notice a ten mile per hour wind ...[which] might move the leaves on trees." (Cox testi, 23). Cox also testified that winds of 11.5 or 18 miles per hour would cause small branches on a tree to move a little, and light objects on the ground, such as paper, to move, but not sturdy or heavy objects on the ground. On trial defendant conducted a thorough and searching cross-examination of both experts, but did not produce any experts of its own to provide rebuttal testimony regarding causation as to the ladder's fall. A44-45

The plaintiff claimed *res ipsa loquitur* applied and the court delivered a *res ipsa* charge to the jury. The defendant did not submit interrogatories regarding causation to the jury. After deliberating, the jury returned a general verdict awarding the plaintiff $1,200,000.00 in damages against the defendant. Thereafter, the defendant moved to set aside the verdict and for judgment notwithstanding the verdict, claiming that the trial court erred in that it (1) permitted two experts to testify without whose evidence they claim that there was insufficient evidence to sustain a plaintiff's verdict, and (2) that the Court improperly submitted the case to the jury on a theory of *res ipsa loquitur*. Following extensive post-trial hearings, the trial court concluded that Strauss' testimony was not so speculative as to be irrelevant, and that his testimony was admissible and did not constitute scientific evidence that required a validity assessment under *Porter*. The court also concluded that it had properly instructed the jury regarding the plaintiff's theory of negligence under the doctrine of *res ipsa loquitur*. Accordingly, trial court heard and denied defendant's motion to set aside the verdict. The defendant's appealed to the Appellate Court, and

subsequently the Supreme Court of the State of Connecticut, pursuant to Connecticut General Statutes 51-199(c) and Connecticut Practice Book Sec. 65-1, removed the Appeal to itself for disposition. The decision of the Supreme Court of Connecticut is printed in the Appendix at A2.

REASONS FOR GRANTING THE WRIT

I. THE SUPREME COURT OF CONNECTICUT FAILED PROPERLY TO APPLY THE STANDARD FOR DETERMINATION OF AND ADMISSIBILITY FOR SCIENTIFIC EVIDENCE ESTABLISHED IN DAUBERT V. MERREL DEW PHARMACEUTICALS, INC., 509 U.S. 579, 113 S. CT. 2786, 125 L.ED.2d 469 (1993) ("DAUBERT") WHEN IT RULED THAT THE OPINION OF AN EXPERT, BASED ON HIS OWN EXPERIENCE, THAT PREVAILING WIND CONDITIONS COULD NOT HAVE OVERTURNED A LADDER IF THE LADDER WAS SET UP PROPERLY AND FREE FROM DEFECTS, WAS SCIENTIFIC EVIDENCE REQUIRING A RELIABILITY AND VALIDITY ASSESSMENT IN ORDER TO BE ADMISSIBLE AT A PERSONAL INJURY JURY TRIAL, ALTHOUGH THE EXPERT'S OPINION WAS SUPPORTED BY OTHER EVIDENCE AND WAS TESTED ON CROSS-EXAMINATION.

This petition raises important issues regarding the interpretation and application of standards established by this Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed.2d 469 (1993) ("Daubert") in determining what constitutes scientific evidence and under what circumstances such evidence may be

admissible through an expert on trial. The *Daubert* standards were explicitly adopted by the Connecticut Supreme Court in State v. Porter, 241 Conn. 57, 698 A.2d 739 (1997) certiorari denied 523 U.S. 1058, 118 S.Ct 1384, 140 L. Ed.2d 645 (1998). The Connecticut Supreme Court has noted that:

> "Although this court in *Porter* explicitly adopted the *Daubert* test to determine the admissibility of scientific evidence; see *State v. Porter,* supra, 241 Conn. at 68, 698 A.2d 739; we did not explicitly overrule Connecticut precedent regarding the evidence to which such a test should apply. Prior to *Porter,* this court had recognized that the *Frye* test for admissibility should not apply to all expert testimony, but only to that which involves 'innovative scientific techniques ····' *State v.* [*Borrelli*], 227 Conn. 153, 163, 629 A.2d 1105 (1993); *State v. Hasan,* 205 Conn. 485, 489, 534 A.2d 877 (1987). In *Porter* we recognized that *Daubert* 's vagueness as to how and when to apply the factors of the test was necessary. *State v. Porter,* supra, at 78, 698 A.2d 739. In order to maintain flexibility in applying the test, we did not define what constitutes 'scientific evidence.' Id., at 78-79, 698 A.2d 739." State v. Reid, supra, 254 Conn. at 546, 757 A.2d 482." State v. Griffin 273 Conn. 266, 276, 869 A.2d 640 (2005)

In the present case, the Supreme Court of Connecticut concluded that the trial court "improperly admitted certain testimony by plaintiff's expert which testimony was scientific

evidence that required a validity assessment designed to ensure reliability pursuant to State v. Porter, 241 Conn. 57, 698 A.2d 739 (1997) cert. denied, 523 U.S. 1058, 118 S.Ct. 1384, 140 L.Ed.2d 645 (1998)."

Since Porter "explicitly" adopted Daubert's standards, what constitutes "scientific evidence" under Daubert needs to be specifically defined in order to eliminate the perceived vagueness by state courts as to how and when to apply the Daubert standards for testing the validity and reliability of such scientific evidence. Because it is essential for states which, like Connecticut, have adopted the Daubert standards to resolve this important and unsettled area of evidentiary law in the constitutional context of a citizen's right to due process and equal protection of the laws in a jury trial, certiorari is warranted.

In Daubert this Court noted that, when faced with the proffer of expert scientific testimony, "the trial judge must determine at the outset ...whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts at issue. We are confident that federal judges possess the capacity to undertake this review. Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test" Daubert, supra, 593 U.S. at 593, 113 S. Ct. at 2796. This Court also observed that "well established propositions are less likely to be challenged than those that are novel, and they are more handily defended. Indeed, theories that are so firmly established as to have

attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice..." Id., fn. 10.

As for the possibility that abandonment of the Frye "general acceptance" requirement for admission of scientific evidence will result in a "free-for-all" of absurd and irrational pseudoscientific assertions that will get by the judge-gatekeeper, this Court in Daubert reaffirmed its faith in the capabilities of the jury and of the adversary system generally by noting: "Vigorous cross-examination, presentation of contrary evidence and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. Id., 593 U.S. at 595, 113 S.Ct. at 2798.

This Court in Daubert, however, did not specifically define what constitutes "scientific evidence" and, in the opinion of the Supreme Court of Connecticut, was "vague" as to how and when to apply the factors of the validity test. State v. Porter, supra, at 78, 698 A.2d 739.

Accordingly, in Maher v. Quest Diagnostics, 269 Conn. 154, 847 A.2d 978 (2004) the Connecticut Supreme Court established that what is to be considered as scientific must be assessed on a case by case basis. See Message Center Management v. Shell Oil Product, 85 Conn. App. 401, 422, fn. 12 (2004). In Maher, the Court stated that "the standard articulated in Porter applies generally to scientific evidence, unless that scientific evidence is so well established that a threshold admissibility analysis is rendered unnecessary, Id. at 168, fn. 19. "Thus, we exclude from the Porter standard the very few scientific principles that are so firmly established as

to have attained the status of scientific law and properly are subject to judicial notice." (Citations omitted; internal quotation marks omitted; internal alterations omitted) Id. at 169.

The Supreme Court of Connecticut has ruled that "[e]xpert testimony should be admitted when: (1) the witness has a special skill or knowledge directly applicable to a matter in issue, (2) that skill or knowledge is not common to the average person, and (3) the testimony would be helpful to the court or jury in considering the issues." (Internal quotation marks omitted.) Hayes v. Decker, 263 Conn. 677, 683, 822 A.2d 228 (2003); see also Conn.Code Evid. § 7-2.

As the Connecticut Supreme Court noted in State v. Griffin, "In adopting the *Daubert* approach in *Porter*, we "held that scientific evidence should be subjected to a flexible test, with differing factors that are applied on a case-by-case basis, to determine the reliability of the scientific evidence···· *Porter* explicitly stated that the flexible *Daubert* approach was a better approach than the test of general acceptance in the scientific community, which was established in Frye v. United States, 293 F. 1013 (D.C.Cir.1923)." [fn 7] (Citation omitted.)

However, the Connecticut Supreme Court has also ruled that "evidence, even evidence with its roots in scientific principles, which is within the comprehension of the average juror, and which allows the jury to make its own conclusions, based on its independent powers of observation and physical comparison, and without heavy reliance on the testimony of expert witnesses, need not be considered [by the trial court] "scientific" in nature for the purposes of evidentiary admissibility" (Citations omitted, quotation marks omitted.)

Maher v. Quest Diagnostics, supra 269 Conn at 170-71, fn. 2.

In the present case, the trial judge and the Connecticut Supreme Court both applied what they believed to be the *Daubert* standards, but arrived at diametrically opposite results. Since a trial judge has wide discretion in ruling on the admission of evidence, a claimed error can only be reviewed on appeal on the basis of an abuse of that discretion. Accordingly, the finding of an experienced trial judge that the testimony of plaintiff's expert, Mervin Strauss, was not scientific evidence, and the finding of the Supreme Court that such testimony was scientific evidence and that the trial court abused its discretion in ruling otherwise, when both courts applied the same *Daubert* standard, places into sharp contrast the apparent vagueness of the *Daubert* standard itself, as will be shown by a closer examination of the facts of the present case as set forth hereafter.

In the present case, no innovative scientific techniques were used when Mervin Strauss, plaintiff's expert testified that the factors involved in determining causation included the force of the prevailing wind, the manner in which the ladder had been set up and the defects existing in the ladder. Since the defendant's employee, who set up the ladder, could not be identified, how the ladder was set up, the topology of the ground at the exact location of the ladder, and the effect of the prevailing wind on the defective ladder , were also factors that could not be precisely determined. However, Strauss, as a forensic engineer and an accident reconstruction expert, also testified that, based on his years of experience in dealing with ladder fall cases, a properly set up ladder with no defects would not have been toppled by winds of 11.5 to 18 miles per hour prevailing on that day. A 43. The Defendant's conceded

that Strauss' testimony, that a properly set up ladder will not fall over but for the application of external force, was uncontroversial common sense, not requiring a *Porter* analysis. A 42 They claimed, however, that Strauss' testimony that winds of 11.5 or 18 miles per hour would not provide sufficient force to knock over a properly set up ladder in good condition, was scientific evidence requiring a *Porter* hearing. Id.

The trial court concluded that the issue to be determined was "whether in the context of the facts of this case, Strauss' testimony that wind speeds of 11.5 or 18 miles per hour would not knock over a properly set up ladder in good condition was "scientific evidence" subject to a *Porter* [*Daubert*] -type validity assessment by the court." A 42-43

Strauss, however, as the trial court noted, had testified that he was a professional engineer and accident reconstructionist, and the court qualified him as an expert, without objection, in mechanical and forensic engineering. Strauss also testified that as an engineer, he had prior experience assessing ladder accidents and evaluating whether wind would overturn ladders or cause them to close. A 47. He further testified that he had examined "a couple of dozen ladders" in this capacity and every single case involved, as a factor, the application of external forces. Furthermore, testimony from three or four witnesses at the scene supported a jury finding that the prevailing winds on that day were neither high nor strong. A 45 On cross examination, Strauss conceded that he had not done wind tunnel studies or performed mathematical calculations as to the forces applied on the ladder that day.

Plaintiff's other expert, meteorologist Robert Cox, testified that a 10 mile an hour wind would barely move the leaves on a tree, and that an 11.5 to 18 mile per hour wind would cause small branches on a tree to move a little, and light objects on the ground such as paper to move, but not sturdy or heavy objects on the ground. Cox also testified that the National Weather Service issues a high wind watch or high wind warning when "winds in the fifties were expected" and high wind advisories when winds of 39 miles per hour were expected. The ladder that fell onto the plaintiff's ladder had a warning label attached that stated "Do not use in high winds." Strauss testified that the American National Standards Institute for Ladders standards, adopted by the American Ladder Institute require that ladders contain such a warning label. A45.

The trial court therefore, in the exercise of its broad discretion, concluded that Strauss' opinion testimony "did not require a preliminary gatekeeper *Porter*-type validity assessment." The court found that the opinion testimony Strauss provided regarding the effect of wind speeds on a properly set up ladder in good condition "was supported by other evidence, thoroughly tested on cross-examination and [was] not the sort of scientific evidence that would place the jury in the position of abandoning common sense and sacrificing independent judgment to the expert's assertions based on his skill or special knowledge..." Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 170-71, fn. 2. A49-50

Nevertheless, the Connecticut Supreme Court, on appeal by the defendant, reversed the jury award in favor of the plaintiff of $1,200,000, and remanded the present case for a new trial, holding that the trial court had abused its discretion

in determining that Strauss' testimony was not the type of scientific evidence requiring the court to perform its gate-keeper function of having a *Daubert/Porter* type validity hearing.

The principles applicable to review of a trial court's ruling on evidentiary matters are well established in Connecticut. "It is axiomatic that [t]he trial court's ruling on the admissibility of evidence is entitled to great deference. In this regard, the trial court is vested with wide discretion in determining the admissibility of evidence···· Accordingly, [t]he trial court's ruling on evidentiary matters will be overturned only upon a showing of a clear abuse of the court's discretion." (Citations omitted; internal quotation marks omitted.) State v. Perkins, 271 Conn. 218, 252, 856 A.2d 917 (2004). Furthermore, "[i]n determining whether there has been an abuse of discretion, every reasonable presumption should be made in favor of the correctness of the trial court's ruling ····" Id. Because a trial court's ruling under *Porter* involves the admissibility of evidence, we review that ruling on appeal for an abuse of discretion. See e.g., State v. Kirsch, 263 Conn. 390, 399, 820 A.2d 236 (2003).

In Maher v. Quest Diagnostics, Inc., 269 Conn. 154, 1847 A.2d 978 (2004), the Connecticut Supreme Court ruled that "evidence, even evidence with its roots in scientific principles, which is within the comprehension of the average juror and which allows the jury to make its own conclusions based on its independent powers of observation and physical comparison, and without heavy reliance upon the testimony of an expert witness, need not be considered 'scientific' in nature for the purposes of evidentiary admissibility." Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 170-71 n. 22, 847 A.2d

978. See also State v. Hasan, 205 Conn. 485, 534 A.2d 877 (1987); State v. Reid, 254 Conn. 540, 757 A.2d 482 (2000).

Earlier, in State v. Borrelli, 227 Conn. 153, 629 A.2d 1105, the Supreme Court of Connecticut, relying on its analysis in Hasan, held that "satisfaction of the *Frye* test [was] not a necessary precondition for the admission of expert testimony on battered woman's syndrome." Id., at 165, 629 A.2d 1105. Id. at 165, 629 A.2d 1105. In Borrelli, the Court observed that the witness "did not offer any opinion as to whether [the victim] was a battered woman ··· did not apply any scientific instrument or test to specific evidence in the case, [and] did [not] use battered woman's syndrome as a diagnostic tool. ··· Instead, [the witness'] testimony was based on his observations of a large group of battered women through the lens of his educational background and experience." Id., at 164-65, 629 A.2d 1105. Citing Hasan, the Court noted "the jury is in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge···· Furthermore, where understanding of the method is accessible to the jury, and not dependent on familiarity with highly technical or obscure scientific theories, the expert's qualifications, and the logical bases of his opinions and conclusions can be effectively challenged by cross-examination and rebuttal evidence." (Citation omitted.) State v. Hasan, supra, 205 Conn. at 491.

It should be noted that Hasan was analyzed by the trial court in the present case, with court concluding that Mervin Strauss' testimony, although rooted in scientific principles, was nevertheless admissible because it was based on his years of experience in the accident reconstruction field and in the

handling of ladder cases. The trial court also found that the logical bases of his opinions and conclusions were effectively challenged by the defendant on cross examination. They could have been further attacked had the defendant offered rebuttal evidence through his own expert, which defendant failed to do.

The trial court, therefore, properly applied *Daubert* standards in considering the past experience of the expert and noting that weaknesses in the testimony of Strauss were exposed by effective cross-examination. See Daubert v. Merrell Dow Pharmaceuticals, Inc. 593 U.S. at 595, 113 S.Ct. at 2798.

The Maher, Hasan, Borelli and Reid cases established that not everything grounded on scientific principles necessarily has to be subjected to a *Daubert/Porter* reliability evaluation. but the Supreme Court of Connecticut's case by case determination still failed to provide a definition of what constituted scientific evidence requiring exercise of the gate-keeper function by the trial court. These cases also left unanswered the question: under what circumstances does the trial court's exercise of its broad discretion in admitting or excluding evidence under *Daubert/Porter*, become an abuse of discretion requiring reversal? .

Plaintiff seeks to have this Court define what constitutes "scientific evidence" for purposes of the *Daubert* test so that *Daubert* standards can be consistently and uniformly applied by the state courts, such as Connecticut, which have adopted them. The present case points out the stark difference of perception by the courts of what may be considered scientific evidence and how and when to apply the factors of the *Daubert* test to such evidence. Expert testimony

based on scientific principles is presented in the courts of the United States every day in innumerable cases, both civil and criminal. A clear definition by this Court of what constitutes scientific evidence and a clarification of how and when to apply *Daubert* standards to test the admissibility and reliability of such evidence is of vital importance to all litigants and warrants the granting of certiorari in this case.

The plaintiff maintains that the trial court correctly applied the *Daubert* criteria in determining that Mervin Strauss' testimony was not scientific evidence subject to a *Daubert/ Porter* validity assessment and prays that this Court reverse the judgment of the Supreme Court of Connecticut and reinstate the judgment entered by the trial court, that plaintiff recover of the defendant the sum of $1,200,000.

II. THE SUPREME COURT OF CONNECTICUT FAILED PROPERLY TO APPLY THE *DAUBERT* STANDARD IN RULING THAT THE TRIAL COURT ABUSED ITS DISCRETION IN DETERMINING THAT THE OPINION OF PLAINTIFF'S FORENSIC ENGINEER AND ACCIDENT RECONSTRUCTION EXPERT WAS NOT SCIENTIFIC EVIDENCE AND DID NOT REQUIRE A HEARING TO DETERMINE ITS RELIABILITY AND VALIDITY

The Connecticut Supreme Court in the present case, stated that "we limit the scope of our review to whether the trial court abused its discretion in determining that Strauss' opinion was not scientific evidence and that a *Porter* hearing was not required." A.8.

In Hayes v. [illegible]cker, 263 Conn. 677, 683, 822 A.2d 228

(2003), the Court reaffirmed the standard for reviewing trial court rulings on evidentiary matters: "The trial court's ruling on evidentiary matters will be overturned only upon a showing of a clear abuse of the court's discretion···· We will make every reasonable presumption in favor of upholding the trial court's ruling, and only upset it for a manifest abuse of discretion···· [Thus, our] review of such rulings is limited to the questions of whether the trial court correctly applied the law and reasonably could have reached the conclusion that it did····"(Citations omitted.)

"Concerning expert testimony specifically, we note that the trial court has wide discretion in ruling on the admissibility of expert testimony and, unless that discretion has been abused or the ruling involves a clear misconception of the law, the trial court's decision will not be disturbed···· Expert testimony should be admitted when: (1) the witness has a special skill or knowledge directly applicable to a matter in issue, (2) that skill or knowledge is not common to the average person, and (3) the testimony would be helpful to the court or jury in considering the issues." (Internal quotation marks omitted.) State v. Vega, 259 Conn. 374, 392, 788 A.2d 1221, cert. denied, 537 U.S. 836, 123 S.Ct. 152, 154 L.Ed.2d 56 (2002).

The Connecticut Supreme Court has also ruled that "[t]he trial court's discretionary determination that the probative value of evidence is not outweighed by its prejudicial effect will not be disturbed on appeal unless a clear abuse of discretion is shown···· [B]ecause of the difficulties inherent in this balancing process ··· every reasonable presumption should be given in favor of the trial court's ruling···· Reversal is required only whe[n] an abuse of discretion is manifest or whe[n] injustice appears to have been

done." (Internal quotation marks omitted.) State v. Dehaney, 261 Conn. 336, 358, 803 A.2d 267 (2002), cert. denied, 537 U.S. 1217, 123 S.Ct. 1318, 154 L.Ed.2d 1070 (2003).

On appeal of the present case, the Connecticut Supreme Court also affirmed that "[i]n *Porter,* this Court followed the United States Supreme Court's decision in Daubert v. Merrell Dow Pharmaceuticals, Inc. .... and held that scientific evidence should be subjected to a flexible test, with different factors that are applied on a case by case basis to determine the reliability of ths scientific evidence." A 8.

Mervin Strauss, plaintiff's expert, was qualified by the trial court, without objection from the defendant, as an expert in the field of mechanical and forensic engineering. The Connecticut Supreme Court has noted that, once qualified as an expert, the expert's testimony will "assist the jury in understanding the evidence or in determining a fact in issue. Hayes v. Decker, supra, 263 Conn. 686, citing to Conn. Code Evid. Sec.7-2, which states that an expert witness is permitted to give opinion testimony provided that the "witness [has been] qualified as an expert ··· if the testimony will assist the trier of fact in understanding the evidence or in determining a fact in issue."

In reviewing the admissibility of an expert's opinion in Hayes v. Decker, supra, 263 Conn. 677, 683, the Court observed: "We further note that the trial court stated explicitly that its ruling was based on the fact that Friedlander's opinion was not supported by any treatises or studies. Peer review and publication is, however, only one of several nonexclusive factors. See State v. Porter, supra, 241 Conn. at 77-81, 698 A.2d 739. No single *Porter* factor is dispositive. Indeed, as the

United States Supreme Court stated in *Daubert,* "[m]any factors will bear on the inquiry [of whether the proffered scientific evidence is valid], and we do not presume to set out a definitive checklist or test." Daubert v. Merrell Dow Pharmaceuticals, Inc., supra, 509 U.S. at 593, 113 S.Ct. 2786. Moreover, as this court noted in *Porter*, mechanical factor tests have little analytical value, tend to obscure the principles upon which the court should be relying and serve as a label to justify a court's instinctive reaction. State v. Porter, supra, at 79-80, 698 A.2d 739. By excluding Friedlander's testimony on the basis of one *Porter* factor, the trial court improperly treated *Porter* as a mechanical factor test rather than the flexible analysis that it is intended to be."

The trial court in the present case concluded that Strauss' opinion testimony did not require a "preliminary gate-keeper *Porter* type assessment because his opinion "was supported by other evidence [and was] thoroughly tested on cross-examination." The trial court's evaluation is consistent with this Court's holding in Daubert v. Merrell Dow Parmaceuticals, supra, 509 U.S. 593, 113 S.Ct. 2796 that "[v]igorous cross exmination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. Id., 509 U.S. at 596, 113 S. Ct. 2798. (Citation omitted.).

Furthermore, in the exercise of its discretion, the trial court in the present case ruled that a *Daubert /Porter* type hearing was not required because, although Strauss' testimony was rooted in scientific principles, it was "not the sort of scientific evidence that would place the jury in the position of abandoning common sense and sacrificing independent

judgment to the expert's assertions based on his special skill or knowledge". Maher v. Quest Diagnostics, Inc., supra, 269 Conn. 154, 170-71 n. 22, 847 A.2d 978 (2004). "[T]he jury is in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge ... Furthermore, where understanding of the method is accessible to the jury, and not dependent on familiarity with highly technical or obscure scientific theories, the experts qualifications and the logical basis of his opinions and conclusions can be effectively challenged by cross-examination and rebuttal evidence. Hayes v. Decker, supra, 263 Conn. 686.

The defendant in the present case has not claimed that the underlying methodology in this case, the physics of force acting on matter as defined by the laws of motion, is "innovative" so as to require a *Daubert/Porter* analysis. "[S]ome scientific principles may have become so well established that an explicit *Daubert* analysis is not necessary for admission of evidence thereunder..." Hayes v. Decker, supra, 263 Conn. at 687. In State v. Reid, 254 Conn. 540, 546 (2000) the Connecticut Supreme Court had held that the court need not conduct a *Porter*-type hearing because the scientific principles of ballistics and firearm analysis "are so well established that they can be admitted on a mere showing of relevance." In *Daubert*, it should be noted, this Court has specifically ruled that theories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice. Daubert v. Merrell Dow Parmaceuticals, supra, 509 U.S. 593, 113 S.Ct. 2796. In the present case, the effect of a force on an object is determined by the universally accepted *laws of*

motion formulated by Sir Isaac Newton in the seventeenth century, and were subject to judicial notice by the trial court.under Daubert standards. Moreover, it should be noted that the Supreme Court of Connecticut itself has ruled that "under *Porter*, a trial court does not have the discretion to exclude expert opinion because he believes there are better grounds for an alternative conclusion." Hayes v. Decker, supra, 263 Conn. at 686 (Citation omitted.) Accordingly, even if the trial court believed that mathematical calculations using the laws of motion would have provided better grounds for admitting Strauss' opinion, the court still had no discretion to exclude his opinion to the extent that it was based on Strauss experience in investigating ladder accidents as a forensic engineer.

The Supreme Court of Connecticut dismissed Strauss' opinion based on experience by observing that it "was hardly extensive with respect to the specific question on which he was asked to opine." A22. Whether Strauss' experience was sufficiently extensive may have affected the weight to be given his testimony; it did not affect its admissibility. Experience has been recognized as a *Daubert* factor by the Connecticut Supreme Court itself in other cases. See Hayes v. Decker.

This Court has acknowledged in *Daubert* that it did not provide a complete check list of a ll the factors that could or should be considered for admissibility of scientific evidence. Consequently, other factors considered by the trial court in the present case in assessing the admissibility of Strauss' testimony, such as evidence from other witnesses and experts, particularly the meteorologist, are not precluded from consideration as *Daubert* factors.

Furthermore, the Connecticut Supreme Court failed to note or although the defendant had the full opportunity to cross-examine Mervin Strauss, defendant never identified or used an expert of its own or presented contrary evidence refuting Strauss' opinion. "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shakey but admissible evidence. "Daubert v. Merrell Dow Pharmaceuticals, Inc., supra, 509 U.S. 579, 506. 113 S.Ct. 2786, 2798 (Citation omitted.)

As the Connecticut Supreme Court has acknowledged, some "evidence with its roots in scientific principles, which is within the comprehension of the average juror and which allows the jury to make its own conclusions based on its independent powers of observation and physical comparison, and without heavy reliance upon the testimony of an expert witness, need not be considered 'scientific' in nature for the purposes of evidentiary admissibility." Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 170-71 n. 22, 847 A.2d 978. This observation applies to the present case as well. In fact the jurors could well have found that the proximate cause of the plaintiff's injuries was the negligence of the defendant's employees in placing the ladder in such proximity to the plaintiff's ladder, that it would have struck the plaintiff's ladder no matter what the cause of its fall. Therefore, even if the wind had been a factor that caused the ladder to topple over, if the distance to the plaintiff's ladder had been such that the falling ladder would not have reached and struck it, no harm to the plaintiff would have occurred.

Since the jury returned a general verdict, and defendant failed to submit specific questions to the jury on liability, it

cannot be said that Mervin Strauss' testimony was prejudicial to the defendant in that it "affected the jury's evaluation of the remaining evidence presented at the trial.". Accordingly, the *res ipsa loquitur* charge given by the trial court was appropriate, although the Supreme Court of Connecticut did not consider that issue because it ruled that failure to provide a validity assessment to what it termed scientific evidence was dispositive of the case.

In summary, the plaintiff maintains that the Supreme Court of Connecticut for the reasons stated, erred in applying the *Daubert/Porter* standard in the present case in concluding that the trial court abused its discretion when it ruled that Mervin Strauss' testimony was not scientific evidence requiring a *Daubert/Porter* type reliability hearing to determine its admissibility. This Court in *Daubert* did not define what constitutes scientific evidence and did not undertake to list all of the factors to be considered in making a *Daubert* evaluation. Without a more specific definition by this Court of what constitutes scientific evidence and how it is to be evaluated on the principles of *Daubert*, lower courts will continue to come to inconsistent and confusing results, even in the same case, as in the present matter. Various state courts have created their own menus of *Daubert* factors to be considered in the determination and evaluation of scientific evidence, with no indication as to which factors take precedence, and which are necessary, non-exclusive or optional. This has led to confusing and unpredictable results.

As in the present case, a trial court in exercising its wide discretion in evidentiary rulings, and attempting to follow the *Daubert* standard by using one set of *Daubert* factors, may find that it has abused its discretion when an appellate court

selects other *Daubert* factors and comes to a different conclusion. This Court, therefore, should define what constitutes scientific evidence and how and what *Daubert* contemplated factors courts in the exercise of their discretion can apply to determine the reliability and ultimate admissibility of such evidence.

CONCLUSION

The plaintiff maintains that the trial court in the present case correctly applied the *Daubert* criteria in determining that Mervin Strauss' testimony was not scientific evidence subject to a *Daubert/Porter* validity assessment and prays that this Court reverse the judgment of the Supreme Court of Connecticut and reinstate the judgment on a jury verdict entered by the trial court, that plaintiff recover of the defendant the sum of $1,200,000.

Respectfully submitted,

PETITIONER
DAVID PRENTICE

JURI E. TAALMAN, ESQ.
Counsel of Record

TIMOTHY BRIGNOLE, ESQ.
Counsel

Brignole, Bush & Lewis
73 Wadsworth Street
Hartford, CT 06106
Tel: (860) 527-9973/Fax: (860) 527-5929

No. _____

In The

Supreme Court Of The United States

DAVID PRENTICE

Petitioner,

v.

DALCO ELECTRIC, INC.

Respondent.

ON PETITION FOR WRIT OF CERTIORARI
TO THE SUPREME COURT OF CONNECTICUT

APPENDIX

TABLE OF CONTENTS

. . . . . Page
Supreme Court of Connecticut Opinion
David Prentice v. Dalco Electric, Inc., et al A2

Superior Court of Connecticut, Judicial District of New Haven at New Haven, Memorandum of Decision (Frazzini, J.) Defendant's Motion to Set Aside Verdict A30

Supreme Court of Connecticut.

David PRENTICE
v.
DALCO ELECTRIC, INC., et al.

No. 17444.

280 Conn. 336, 907 A.2d 1204 (2006)

Argued April 17, 2006.
Decided Oct. 17, 2006.

Background: Sign installer brought personal injury action against company which contracted for installation of sign, alleging he was injured while installing sign. Following a jury trial, the Superior Court, Judicial District of New Haven at Meriden, Levine, J., entered judgment for installer. Company appealed, and the Supreme Court transferred the appeal from the Appellate Court.

Holdings: The Supreme Court, Borden, J., held that:

(1) expert opinion testimony that prevailing wind conditions could not have overturned ladder if ladder was set up properly and free from defects was scientific evidence that required a reliability and validity assessment;
(2) reliability hearing was required even though underlying physical laws governing mass, force and motion were fundamental and dealt with low level forces on common objects; and
(3) error in admitting testimony without a reliability hearing was prejudicial to company.

BORDEN, J.

The dispositive issue in this appeal is whether the trial court properly admitted scientific evidence without first holding a hearing pursuant to State v. Porter, 241 Conn. 57, 698 A.2d 739 (1997), cert. denied, 523 U.S. 1058, 118 S.Ct. 1384, 140 L.Ed.2d 645 (1998). The defendant, Dalco Electric, Inc. (Dalco), appeals [1] from the judgment of the trial court in favor of the plaintiff, David Prentice, following a jury trial.[2] The defendant claims that the trial court improperly admitted certain expert testimony because the testimony lacked the required scientific foundation.[3] We conclude that the testimony in question was scientific evidence that required a validity assessment designed to ensure reliability pursuant to our analysis in Porter. Accordingly, we reverse the judgment of the trial court and remand the case for a new trial.

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[1] The named defendant appealed from the judgment of the trial court to the Appellate Court. We then transferred the appeal to this court pursuant to General Statutes § 51-199(c) and Practice Book § 65-1.

[2] The plaintiff's employer, B.G. Graphics, Inc., was permitted to intervene as a plaintiff in this matter but did not file a brief and waived its right to oral argument. For convenience, we refer to Prentice as the plaintiff.

[3] The defendant also claims that the evidence was inadmissible on other grounds, and that the trial court improperly instructed the jury on the theory of res ipsa loquitur. In light of our order for a new trial on the issue of a Porter hearing, we decline to review these claims because we conclude that it is unlikely that they will arise on remand.

In addition, the plaintiff also brought this action against 125 Research, LLC, which owns the building where Dalco operates its business and where the negligence at issue allegedly occurred. After the jury returned a verdict in favor of 125 Research, LLC, the trial court rendered judgment accordingly and the plaintiff has not appealed from that judgment. As a result, 125 Research, LLC, is not a party to this appeal and we refer to Dalco as the defendant.

The plaintiff brought this personal injury action against the defendant alleging negligence. Prior to trial, the plaintiff identified Mervin Strauss, a professional forensic engineer and accident reconstructionist, as an expert witness. The defendant filed a motion in limine seeking to preclude Strauss' testimony and requested a Porter hearing. The trial court declined to rule on this motion prior to trial and, over the defendant's repeated objection, allowed Strauss' expert testimony to be entered into evidence.[4] The jury returned a verdict for the plaintiff awarding the plaintiff $1.2 million in damages. Subsequently, the defendant filed a motion to set aside the jury's verdict. Following extensive posttrial hearings, the trial court concluded that Strauss' testimony was

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[4] The trial court declined to rule on several other motions filed by the defendant to exclude Strauss' expert testimony, including a motion to strike, which was filed immediately following the conclusion of Strauss' testimony at trial, and a motion for a directed verdict, which was filed at the conclusion of the plaintiff's case. Additionally, throughout the four days of Strauss' testimony, the defendant repeatedly reiterated its objection to Strauss' expert opinion and asked the trial court to conduct a Porter hearing. Over the defendant's objection, the trial court declined to make a ruling on the issue and allowed Strauss' testimony to proceed.

admissible and did not constitute scientific evidence that required a validity assessment under Porter.[5] Accordingly, the trial court denied the defendant's motion to set aside the jury's verdict and rendered judgment thereon. This appeal followed.

The jury reasonably could have found the following facts. The plaintiff was employed by B.G. Graphics, Inc., a sign making company hired by the defendant to install a sign on the front of its building in Meriden. The plaintiff accompanied Benedict Gagliardi, Jr., a partner at B.G. Graphics, Inc., to complete the installation. Upon arriving at the defendant's building in Meriden and learning of the precise location on the building where the sign was to be installed, the plaintiff and Gagliardi informed Daniel Luft, a part owner of the defendant, that they would be unable to complete the work that day because the ladders that they had with them were too short. Luft offered Gagliardi the use of one of the defendant's extension ladders in order to install the sign. Gagliardi accepted Luft's offer solely to enable the plaintiff to take the necessary measurements to facilitate the installation of the sign on a future date. Gagliardi and the plaintiff informed Luft, however, that two people and two extension ladders were required to install the sign and that borrowing an extension ladder did not mean that the sign would go up that day.[6] Luft offered the plaintiff the use of another one of the

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[5]The trial court also concluded that Strauss' testimony was not so speculative as to be irrelevant, and that it had properly instructed the jury regarding the plaintiff's theory of negligence under the doctrine of res ipsa loquitur. See footnote 3 of this opinion.

[6]Gagliardi also informed Luft that the plaintiff was able to climb an extension ladder, but that Gagliardi was afraid of heights and was unable to do so.

defendant's extension ladders and informed him that he was willing to provide any help necessary to complete the installation. Neither the plaintiff nor Gagliardi accepted Luft's offer to locate a second ladder or to provide assistance.

The plaintiff and Gagliardi used the first extension ladder provided by the defendant and positioned it at the front of the building so that the plaintiff could take the necessary measurements for the sign's future installation. Although Gagliardi and the plaintiff had decided to take measurements only, and to install the defendant's sign on another day, Luft located a second extension ladder in one of the defendant's storage areas and, with the assistance of one of his employees, brought it to the front of the building where the sign was to be installed. Luft leaned the second ladder against the side of the building approximately eight to ten feet to the left of where the plaintiff had positioned the first ladder.[7] The plaintiff informed Luft that he and Gagliardi would not use the second ladder because it was in poor condition and because they were only taking measurements, which did not require multiple people or ladders to complete. In particular, the plaintiff noticed that the second ladder was missing braces required for stability and that someone had tried to repair it by bolting pieces of iron to the bottom of the ladder's legs.

The plaintiff fully extended the first ladder and rested the top section of the ladder against the aluminum edge of the

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[7] The second ladder subsequently was fully extended to the roof of the building. The record is unclear as to who fully extended the second ladder and completed its set up. The plaintiff and Gagliardi testified, however, that they never touched the second ladder and had observed only Luft and his employees handle it.

building's roof. The plaintiff then climbed approximately ten feet up the first ladder to take measurements for the sign's future installation. As the plaintiff was completing his work, the second ladder, which was positioned approximately ten feet to the left of where the plaintiff was working, fell to the right, slid against the edge of the defendant's roof and struck the first ladder, on which the plaintiff was standing, causing him to fall to the ground and to sustain serious injuries. No one was standing on or touching the second ladder when it fell and collided with the plaintiff.

On the day of the incident, Meriden and the surrounding area experienced sustained winds of 11.5 miles per hour, with gusts of wind up to 18 miles per hour. The safety label on the ladder that collided with the plaintiff stated that it should not be used in high wind. Meteorologically, a high wind warning occurs when winds exceed thirty-nine miles per hour, and a high wind advisory occurs when a sustained wind exceeds forty-five miles per hour. Neither a high wind advisory nor a high wind warning had been issued for Meriden on the day the plaintiff was injured. Building on the facts surrounding the weather conditions on the day of the accident, the plaintiff introduced Strauss' expert testimony in an attempt to demonstrate that it would have been physically impossible for the prevailing winds to have overturned a ladder that was properly set up and free from defects. Additional facts will be set forth as necessary.

We begin with the standard of review that governs this case. It is well established that "[t]he trial court's ruling on evidentiary matters will be overturned only upon a showing of a clear abuse of the court's discretion." (Internal quotation marks omitted.) State v. Billie, 250 Conn. 172, 180, 738 A.2d

586 (1999). Concerning expert testimony specifically, "the trial court has wide discretion in ruling on the admissibility of expert testimony and, unless that discretion has been abused or the ruling involves a clear misconception of the law, the trial court's decision will not be disturbed···· Expert testimony should be admitted when: (1) the witness has a special skill or knowledge directly applicable to a matter in issue, (2) that skill or knowledge is not common to the average person, and (3) the testimony would be helpful to the court or jury in considering the issues." (Citations omitted; internal quotation marks omitted.) Id.

"Beyond these general requirements regarding the admissibility of expert testimony, [t]here is a further hurdle to the admissibility of expert testimony when that testimony is based on ··· scientific [evidence]. In those situations, the scientific evidence that forms the basis for the expert's opinion must undergo a validity assessment to ensure reliability. State v. Porter, supra, 241 Conn. at 68-69, 698 A.2d 739. In Porter, this court followed the United States Supreme Court's decision in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), and held that scientific evidence should be subjected to a flexible test, with differing factors that are applied on a case-by-case basis, to determine the reliability of the scientific evidence···· Following State v. Porter, supra, at 81-84, 698 A.2d 739, scientific evidence, and expert testimony based thereon, usually is to be evaluated under a threshold admissibility standard assessing the reliability of the methodology underlying the evidence and whether the evidence at issue is, in fact, derived from and based upon that methodology····" (Citations omitted; internal quotation marks omitted.) Maher v. Quest Diagnostics, Inc., 269 Conn. 154,

168, 847 A.2d 978 (2004). Accordingly, we limit the scope of our review to whether the trial court abused its discretion in determining that Strauss' opinion was not scientific evidence and that a Porter hearing was not required. See State v. Kirsch, 263 Conn. 390, 399, 820 A.2d 236 (2003); State v. Pappas, 256 Conn. 854, 878, 776 A.2d 1091 (2001).

By way of further background, we are also mindful that "[i]n State v. Porter, supra, 241 Conn. at 78-80, 698 A.2d 739, we expressly recognized that, because the term scientific evidence houses such a large and diverse variety of topics, the formulation of a mechanical evidentiary standard of admissibility designed to apply universally to the many forms scientific evidence may take is an unworkable concept. Rather, the better formulation is a general, overarching approach to the threshold admissibility of scientific evidence···· In accordance with this philosophy, we set forth in Porter a number of different factors, nonexclusive and whose application to a particular set of circumstances could vary, as relevant in the determination of the threshold admissibility of scientific evidence···· In particular, we recognized the following considerations: general acceptance in the relevant scientific community; whether the methodology underlying the scientific evidence has been tested and subjected to peer review; the known or potential rate of error; the prestige and background of the expert witness supporting the evidence; the extent to which the technique at issue relies upon subjective judgments made by the expert rather than on objectively verifiable criteria; whether the expert can present and explain the data and methodology underlying the testimony in a manner that assists the jury in drawing conclusions therefrom; and whether the technique or methodology was developed solely

for purposes of litigation." (Citations omitted; internal quotation marks omitted.) Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 179-80, 847 A.2d 978.

In Porter, we also set forth a "fit" requirement for scientific evidence. Id., at 180, 847 A.2d 978. We stated that the "proposed scientific testimony must be demonstrably relevant to the facts of the particular case in which it is offered, and not simply be valid in the abstract···· Put another way, the proponent of scientific evidence must establish that the specific scientific testimony at issue is, in fact, derived from and based upon [the scientifically reliable] methodology···· [A]lthough some conclusions can be reasonably inferred from the methodology employed, others cannot." (Citations omitted; internal quotation marks omitted.) Id.

Similarly, we recognized in Porter that "a critical postulate that underlies the Porter factors and indeed underlies the entire Porter analysis [is that] in order for the trial court, in the performance of its role as the gatekeeper for scientific evidence, properly to assess the threshold admissibility of scientific evidence, the proponent of the evidence must provide a sufficient articulation of the methodology underlying the scientific evidence. Without such an articulation, the trial court is entirely ill-equipped to determine if the scientific evidence is reliable upon consideration of the various Porter factors. Furthermore, without a clear understanding as to the methodology and its workings, the trial court also cannot properly undertake its analysis under the fit requirement of Porter, ensuring that the proffered scientific evidence, in fact, is based upon the reliable methodology articulated." Id., at 181, 847 A.2d 978.

The defendant claims that a new trial is necessary because the trial court improperly admitted Strauss' expert opinion testimony. In particular, the defendant contends that Strauss' testimony was scientific evidence that lacked the required scientific foundation and was, therefore, inadmissible because it had not been subjected to a reliability and validity assessment under Porter. Conversely, the plaintiff contends that the trial court properly concluded that Strauss' testimony was not scientific evidence and, therefore, that its admissibility was not dependent on the outcome of a Porter hearing. We agree with the defendant.

The following additional facts are relevant to our analysis of the question of whether a Porter hearing was required in this case. The plaintiff alleged that the defendant had erected a defective ladder, which "gave out at the defective portion of the foot, and began to slide across the front of the building striking the ladder [that] the [p]laintiff was on···" In particular, the plaintiff claimed that the defendant was negligent due to its numerous acts and omissions related to the "defective condition" of the ladder and its improper installation.

Strauss was qualified by the trial court, without objection, as an expert in the field of mechanical and forensic engineering. At trial, Strauss opined, over the defendant's objection, that the prevailing wind conditions in Meriden on the day of the accident would not have caused a properly set up ladder, free of defects, to fall from the building and collide with the plaintiff. Strauss further testified, however, that he could not state, within a reasonable degree of engineering probability, that the wind conditions on the day of the accident were not the sole cause of the second ladder's becoming dislodged from

its resting position and colliding with the plaintiff.[8] Strauss also acknowledged at trial that determining the amount of force required to move a particular object is an exercise within the realm of physics that requires the accumulation of certain factual data and the completion of mathematical calculations. Specifically, Strauss noted that, in order to make the necessary calculations in this case, an expert would need to know the wind speed, the weight of the ladder, and the coefficient of friction applicable to the ladder and to the aluminum edge of the defendant's roof. Equipped with this information, an engineer could then calculate whether an 11.5 to 18 mile per hour wind could apply sufficient force to cause a properly set up ladder of the same size, weight, and condition as the ladder in this case, to fall. Strauss acknowledged that he had not acquired any of this information as part of his investigation and experimentation at the accident site, and had not performed the scientific calculations that would allow him to express his opinion to a "reasonable degree of engineering probability."

Indeed, Strauss testified that his conclusions were based on his experience as an engineer and that, despite his ability to undertake such an effort, at no point had he attempted to apply the readily available and applicable tools of physics and mathematics with which he could have tested his hypothesis. We also note that Strauss asserted that common experience may allow a layperson to conclude that a ladder will fall only if it is set up improperly, is defective, or is subjected to

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[8]Strauss' recognition that he could not offer an opinion about the wind's effect on the ladder within a "reasonable degree of engineering probability" was a disclaimer about his expert opinion that was also echoed in his deposition testimony prior to trial.

sufficient external force to knock it over. Strauss maintained, however, that common experience was not sufficient to enable a layperson to assess the likely effect of a wind at a certain speed on an immobile ladder. To the contrary, Strauss asserted that what distinguished him from an ordinary layperson was his engineering experience and education, which allowed him to apply the laws of physics to make such a calculation.

The trial court concluded that Strauss' opinion testimony did not require a "preliminary gatekeeper Porter-type validity assessment." In particular, it noted that "[t]he opinion testimony [that Strauss] provided ··· regarding the effect of certain wind speeds on a properly setup ladder in good condition was supported by other evidence [and was] thoroughly tested on cross-examination····" Additionally, the trial court ruled that a Porter hearing was not required because, although Strauss' testimony was rooted in scientific principles, it was "not the sort of scientific evidence that would place the jury in the position of abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge." (Internal quotation marks omitted.) We conclude that Strauss' opinion was scientific evidence within the meaning of Porter, and that the trial court abused its discretion by permitting Strauss' expert opinion testimony without first assessing the validity of the methodology underlying his opinion as part of a Porter hearing.

First, by concluding that a separate validity assessment was not required under Porter, at least in part because Strauss' opinion testimony was supported by other evidence and was

tested thoroughly on cross-examination,[9] the trial court misconstrued the task that was before it. Specifically, the fact that there was other evidence in the record concerning the wind, namely, the subjective impressions of laypersons, a meteorologist's description of the prevailing winds on the day of the accident,[10] and the warning that the ladder should not

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[9]Over the course of four days of testimony, Strauss was asked several times for his opinion as to whether the wind could have caused a ladder that had been set up properly and was in good condition to fall over. On direct examination, he offered the opinion that an 11.5 to 18 mile per hour wind would not cause such a ladder to fall. On cross-examination, however, Strauss testified, as he had at his deposition, that he could not offer such an opinion "within a reasonable degree of engineering probability." As part of redirect examination by the plaintiff, Strauss changed his answer and testified that an 11.5 to 18 mile per hour wind would not have caused such a ladder to fall "within a reasonable degree of engineering probability." On recross-examination, however, Strauss contradicted this statement once again and stated that he could not rule out an 11.5 mile per hour wind as the sole cause of the plaintiff's accident "within a reasonable degree of engineering probability." The equivocal nature of Strauss' testimony during cross-examination does not render his opinion unscientific. Strauss' contradictory testimony, however, does highlight the importance of a trial court conducting a reliability and validity assessment of Strauss' methodology pursuant to our analysis in Porter.

[10]In particular, in addition to testifying that the prevailing winds in Meriden ranged from 11.5 and 18 miles per hour on the day of the accident, Robert Cox, a meteorologist, testified that the winds likely would move leaves and small branches on trees, but not stable objects on the earth's surface. The plaintiff does not

be used in high winds, does not render Strauss' opinion unscientific per se. In short, otherwise scientific evidence does not become unscientific simply because the opposing party has had an opportunity for cross-examination, or because there is unscientific evidence that tends to corroborate the expert's testimony. Indeed, all scientific evidence is subject to cross-examination and likely will find some corroboration from other evidence in the record. This fact, however, does not obviate the need for the trial court separately to determine whether Strauss' testimony required a validity assessment under Porter.

Second, with respect to the trial court's conclusion that a Porter hearing was not required because Strauss' testimony, although rooted in scientific principles, would not place the jury in the position of abandoning common sense and sacrificing its independent judgment, Strauss' own statements at trial do not support the trial court's ruling. As discussed previously, Strauss acknowledged that common experience was not sufficient to enable a layperson to assess the likely effect of a wind at a certain speed on an immobile ladder. To the contrary, Strauss testified that the determination of the amount of force required to move a particular object is an exercise within the realm of physics, and requires the accumulation of certain factual data and the completion of mathematical calculations. This exercise is very different from an understanding of the general principle, which may be

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claim, however, that the testimony of Cox, who is a meteorologist but is not an engineer, would have been sufficient for the jury to find liability. It is clear from the record that it was Strauss' testimony that formed the necessary basis for the plaintiff's claim of negligence.

known to the average layperson, that if an external force is exerted on an object, that object may fall over. Indeed, an understanding of how to apply the sciences of physics and mathematics is necessary to determine the amount of force required to dislodge the defendant's ladder from the building, and whether that force could have been exerted by the prevailing winds in Meriden on the day of the accident, and the average person does not possess such an understanding.

Strauss acknowledged this reality when he testified that he would need to know several variables, including the weight of the ladder and the coefficient of friction between the ladder and the building. Additionally, Strauss testified that physics and mathematics are scientific tools relied upon by engineers, but that he was unable to state his opinion to a "reasonable degree of engineering probability" because his investigation of the accident did not include any scientific calculations concerning what forces were applied to the ladder by the wind.[11] Accordingly, although

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[11]Specifically, during cross-examination at trial, the following colloquy took place between Strauss and the defendant's counsel:

"Q. You ··· testified last Friday that among the tools that the engineer has at his disposal is physics?

"A. Yes.

"Q. And physics is a science?

"A. Yes.

"Q. That relies heavily on mathematics?

"A. Yes, it is a tool.

"Q. The science of ··· physics relies on algebra, trigonometry and calculus does it not?

"A. Yes.

"Q. And in your file you have no mathematical calculations at all concerning what forces were applied to exhibit 40 on March 16, 2000, isn't that true?

"A. That is true.

"Q. There isn't a single mathematical calculation in your file concerning that subject, right?

"A. Correct.

"Q. Nor are you able as you sit here now to undertake those mathematical calculations because you don't know one of the components of the equation, namely, the weight, isn't that right?

"A. As of the moment, no.

"Q. Now the ladder was available to you to weigh, wasn't it?

"A. Yes.

"Q. And if you had wanted to weigh it nobody told you that you couldn't, correct?

"A. Correct.

"Q. And you knew, didn't you, as an engineer who uses physics, that in order to do a mathematical computation you need to

know, among other things, what is the weight, right?

"A. That is one of the factors.

"Q. But you didn't ascertain what it was?

"A. I did not sir····

"Q. Do I understand your testimony here to be that a wind of 11.5 miles per hour cannot in your opinion as an engineer cause a properly set up ladder that is not defective to fall over, is that your opinion?

"A. That is my opinion.

"Q. But that is based on no mathematical calculations?

"A. Based on years of experience sir.

"[The Defendant's Counsel]: I didn't ask you that.

"Q. I asked you, that is based on no mathematical computations, correct?

"A. That is correct.

"Q. And it is based on your not knowing what the ladder weighed?

"A. That is true.

"Q. Even though you recognized that in order to properly apply the principles of physics to this problem you [would] need to work out a mathematical equation that calculates not only the force which in this case would be 11.5 miles per hours in this

Strauss failed to gather the relevant data that would have enabled him to complete the required calculations,[12]FN12 his opinion that the force created by the prevailing wind conditions in Meriden on the day of the accident was not sufficient to have caused a ladder that had been set up properly and was free of defects to fall over, was dependent on the result of scientific measurement and calculation. This opinion, therefore, constituted scientific evidence that required a validity assessment pursuant to our analysis in Porter.

Additionally, by exempting Strauss' opinion from a validity assessment under Porter, the trial court ignored the "critical postulate" that underlies the entire Porter analysis, which is that any exemption for scientific evidence that depends upon

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hypothetical, but also the weight of the ladder, correct?

"A. You would need to know all of that information, yes."

[12]We note that Strauss' failure to gather and analyze scientific data in forming his conclusion is exactly the sort of flaw in his expert opinion that a validity assessment pursuant to Porter was meant to identify. In particular, as we stated in Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 181, 847 A.2d 978, the "critical postulate" underlying the entire Porter analysis is that "the proponent of the evidence must provide a sufficient articulation of the methodology underlying the scientific evidence. Without such an articulation, the trial court is entirely ill-equipped to determine if the scientific evidence is reliable [and] also cannot properly undertake its analysis under the 'fit' requirement ··· ensuring that the proffered scientific evidence, in fact, is based upon the reliable methodology articulated."

existing techniques must presuppose an ability on the part of the proponent of the evidence to "provide a sufficient articulation of the methodology underlying the scientific evidence." Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 181, 847 A.2d 978. In this case, by Strauss' own admission, and despite his familiarity with the scientific calculations that would have allowed him to have tested his theory that the force of the prevailing wind was not sufficient to upset a ladder that was properly set up and was free from defects, he used no methodology to arrive at his conclusions. In light of our previous conclusion that Strauss' opinion on the effect of the wind was "scientific evidence" for the purposes of a Porter analysis, the trial court was obliged to hold a hearing and the plaintiff was obliged to explain the methodology underlying Strauss' opinion. This information was necessary to assess the scientific reliability and validity of Strauss' opinion.

The plaintiff argues that pursuant to our holdings in State v. Reid, 254 Conn. 540, 546-49, 757 A.2d 482 (2000), and State v. Hasan, 205 Conn. 485, 490-91, 534 A.2d 877 (1987), a validity assessment by the trial court was not required in this case because not all testimony grounded in scientific principles requires a Porter hearing. We disagree.

In Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 170-71 n. 22, 847 A.2d 978, we noted a line of cases dealing with scientific evidence that falls within a narrow category of exceptional situations wherein "although ostensibly rooted in scientific principles and presented by expert witnesses with scientific training, [the evidence is] not scientific for the purposes of our admissibility standard for scientific evidence, either before or after Porter." (Internal quotation marks

omitted.) In particular, we referenced State v. Reid, supra, 254 Conn. at 547-49, 757 A.2d 482, in which we concluded that the testimony of a criminologist regarding visible characteristics of, and similarities between, strands of hair was not scientific evidence for Porter purposes,[13] and State v. Hasan, supra, 205 Conn. at 490, 534 A.2d 877, in which we held that a podiatrist's testimony as to the likelihood that a certain pair of sneakers would fit on the defendant's feet was not scientific evidence.[14] We conclude that Strauss' opinion

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[13]Specifically, in State v. Reid, supra, 254 Conn. at 545-49, 757 A.2d 482, we held that a validity assessment was unnecessary when the state sought to present the expert testimony of a criminologist who had performed a microscopic analysis and comparison of hair samples. The witness presented enlarged photographs of the hair samples and explained to the jury how he had compared them. The jurors were then free to make their own comparison and decide for themselves whether the hairs matched, leading us to conclude that a Porter hearing was not required because the criminologist's testimony "simply required the jurors to use their own powers of observation and comparison." Id., at 547, 757 A.2d 482.

[14] Specifically, in State v. Reid, supra, 254 Conn. at 545-49, 757 A.2d 482, we held that a validity assessment was unnecessary when the state sought to present the expert testimony of a criminologist who had performed a microscopic analysis and comparison of hair samples. The witness presented enlarged photographs of the hair samples and explained to the jury how he had compared them. The jurors were then free to make their own comparison and decide for themselves whether the hairs matched, leading us to conclude that a Porter hearing was not required because the criminologist's testimony "simply required the jurors to use their own powers of observation and comparison." Id., at 547, 757 A.2d 482.

does not fit within the category of expert opinion identified in these cases, nor does it fit within the rationale employed in those cases to conclude that a validity assessment pursuant to Porter was not required.

This narrow and distinct line of cases "indicates that evidence, neither scientifically obscure nor instilled with an aura of mystic infallibility ··· which merely places a jury ··· in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge ··· is not the type of scientific evidence within the contemplation of Porter ····" (Citations omitted; internal quotation marks omitted.) Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 170 n. 22, 847 A.2d 978. In particular, we noted that "Hasan and Reid stand for the proposition that evidence, even evidence with its roots in scientific principles, which is within the comprehension of the average juror and which allows the jury to make its own conclusions based on its independent powers of observation and physical comparison, and without heavy reliance upon the testimony of an expert witness, need not be considered scientific in nature for the purposes of evidentiary admissibility." (Internal quotation marks omitted.) Id., at 170-171 n. 22, 847 A.2d 978. In short, in Hasan and Reid, the expert witness taught the jury how to look at physical evidence and then left the jury to look at that evidence and reach its own conclusions.

Strauss did not teach the jury how to calculate the force that a wind of 11.5 to 18 miles per hour would exert on a ladder or how much force is required to cause a ladder that is properly set up and in good condition to be set into motion and to slide

against the aluminum edge of the defendant's roof. Similarly, Strauss did not provide the jury with the necessary factual data to undertake such a calculation because he never performed that analysis as part of his own investigation. Consequently, the jury in this case lacked any of the data, education or tools required to determine whether a particular wind speed could have overturned such a ladder. Contrary to the plaintiff's assertion, therefore, the jury largely was dependent on Strauss' assessment of the role that the wind played in the accident, and had no meaningful way to evaluate independently the amount of force that the prevailing wind would have exerted on a ladder leaning against the defendant's building. As a result, this case must be distinguished from Reid and Hasan because the jury in this case could not evaluate Strauss' hypothesis or compare the likely effect of the force of the prevailing wind on the ladder that collided with the plaintiff, as opposed to a ladder that was properly set up and free from defects.

The problem with the jury's dependence on Strauss' testimony is that his opinion, by his own admission, was based only on his experience, and was formed without the benefit of an established scientific methodology. Strauss' opinion nevertheless was introduced at trial under the seal of science because it came from an individual qualified as an expert in the fields of mechanical and forensic engineering. The implication of a scientific foundation for his opinion was especially misleading because, although Strauss testified that as a forensic engineer he had previous experience in assessing whether wind would overturn an object on the earth's surface and had examined "at least a couple of dozen of ladders or more over the years" in connection with accidents, he also acknowledged that he did not have experience in determining

what force a wind must exert on a ladder to cause it to fall over, and that none of his previous ladder cases dealt with a fact pattern similar to this case. Strauss' experience, therefore, was hardly extensive with respect to the specific question on which he was asked to opine.

Furthermore, the trial court highlighted the perceived expert nature of Strauss' testimony by excluding the lay opinion of an eyewitness to the incident who testified that he believed that a gust of wind had caused the second ladder to fall and to collide with the plaintiff.[15] sum, if Strauss' expertise as a

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[15]Specifically, the following colloquy took place at trial during direct examination of Keith Donahue, an employee of the defendant, by the defendant's counsel:

"Q. So this ladder here, exhibit 40, slid to the right coming in contact with the ladder that [the plaintiff] was on, correct?

"A. Correct.

"Q. And do you know what caused this ladder to fall over?

"The Court: This is just, yes or no.

"A. Yes.

"Q. Can you tell us what?

"A. I believe that it was the wind.

"[The Plaintiff's Counsel]: Objection.

"[The Defendant's Counsel]: What is the basis?

scientist made his opinion admissible, as compared to the opinion of a layperson who witnessed the accident but had no scientific training, then it was incumbent on the trial court to conduct a Porter hearing to determine whether Strauss had used his expertise to develop his opinion.[16] of such a validity assessment by the trial court in its role as gatekeeper, the jury in this case was confronted with a scientific conclusion, from an individual qualified as a scientific expert and presumably

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"The Court: Wait, what is the objection?

"[The Plaintiff's Counsel]: It calls for a conclusion. It calls for an opinion, a legal opinion, with regard to causation.

"The Court: Counsel sidebar please.

"[The Plaintiff's Counsel]: It is without foundation.

"The Court: I am going to sustain the objection to that question. Members of the jury, I am striking that answer. You are not to consider that answer in your deliberations."

[16]We are also mindful that in order for an expert's opinion to be admissible, it must assist the trier of fact in "understanding the evidence or in determining a fact in issue." Conn.Code Evid. § 7-2. Additionally, in order to be helpful and, therefore, relevant, an expert's opinion must be derived from the application of whatever skill or knowledge he or she brings to the case. See State v. Billie, supra, 250 Conn. at 178-81, 738 A.2d 586 (expert's knowledge concerning behavioral effects caused by components of drug mixture not admissible where expert had no knowledge of mixture ratio). Strauss' opinion failed to meet this standard because, by his own admission, it was based only on his experience, rather than on calculations derived from the laws of physics and mathematics.

rooted in scientific principles, when in fact the opinion had no basis in science and was derived from the expert's limited experience with the particular factual situation at issue. The trial court's failure to characterize Strauss' testimony as scientific evidence and to carry out its role as a gatekeeper by conducting a Porter hearing, constituted an abuse of its discretion.

The plaintiff also argues that a Porter hearing was not required because the underlying physical laws governing mass, force and motion were so fundamental and dealt with such low level forces on common objects that it was unnecessary for Strauss, given his experience and qualifications as an engineer, to conduct any experimentation or testing. We disagree.

First, we reiterate that the question of whether the prevailing winds in Meriden on the day of the plaintiff's accident were capable of generating enough force to overturn an immobile ladder leaning against the defendant's building is more complicated than simply understanding that a force applied to an object may cause the object to fall over. Specifically, as Strauss acknowledged at trial, he never calculated the amount of force that was generated by the wind on the day of the accident or how this force was hindered by the coefficient of friction attributable to the building's roof when he investigated the accident. Moreover, both figures would have required scientific data gathering and experimentation that would have been inaccessible to the average juror and could not have been performed by the average juror.

Additionally, the general acceptance in the scientific community of Newtonian physics does not eliminate the need

for a validity assessment in this case pursuant to Porter. In short, a party may not circumvent a validity assessment simply by asserting that generally recognized physical laws serve as the underpinnings for the scientific methodology on which they seek to rely. Most scientific methodologies are capable of being reduced to a well recognized set of scientific principles. Under Porter, however, it is the methodology itself that is subject to a validity assessment. See Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 179, 847 A.2d 978. Accordingly, if the stated methodology,[17] apart from its foundational physical laws, is not accessible to the jury, as was the case here, the trial court is required to conduct a validity assessment pursuant to Porter.

Finally, the plaintiff contends that the defendant was not prejudiced by the trial court's admission of Strauss' opinion without a preliminary Porter hearing and, therefore, any error was harmless. In particular, the plaintiff argues that the fact that there was other evidence in the record to support the jury's verdict, and that the defendant had the opportunity to take Strauss' deposition, to cross-examine him at trial, and to present rebuttal evidence, all negated any prejudice that may have occurred by admitting Strauss' expert opinion without an assessment of its reliability. We disagree.

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[17]We note that in this case, Strauss did not state a methodology for his opinion, other than his experience as a professional engineer, which made it impossible for the trial court to evaluate whether the methodology was reliable and whether the expert opinion was "in fact, derived from and based upon that methodology...." Maher v. Quest Diagnostics, Inc., supra, 269 Conn. at 168, 847 A.2d 978.

We acknowledge that "[e]ven when a trial court's evidentiary ruling is deemed to be improper, [as is the case here] we [still] must determine whether that ruling was so harmful as to require a new trial···· In other words, an evidentiary ruling will result in a new trial only if the ruling was both wrong and harmful···· [T]he standard in a civil case for determining whether an improper ruling was harmful is whether the ··· ruling [likely] would [have] affect[ed] the result." (Citations omitted; emphasis added; internal quotation marks omitted.) Ryan Transportation, Inc. v. M & G Associates, 266 Conn. 520, 530, 832 A.2d 1180 (2003); see also Swenson v. Sawoska, 215 Conn. 148, 153, 575 A.2d 206 (1990) (rejecting standard that would have required treating as harmless error any evidentiary ruling, regardless of its effect upon verdict, so long as evidence not implicated by ruling was sufficient as matter of law to sustain verdict). Additionally, we have held that "any error in the admission of evidence does not require reversal of the resulting judgment if the improperly admitted evidence is merely cumulative of other validly admitted testimony." (Internal quotation marks omitted.) Fink v. Golenbock, 238 Conn. 183, 211, 680 A.2d 1243 (1996). We conclude that the trial court's improper decision to admit Strauss' testimony without first conducting a Porter hearing likely affected the result of the trial and, therefore, warrants a new trial.

First, in the context of a harmless error analysis, it is not enough that there was other evidence in the record to support the jury's verdict. As noted previously, we specifically rejected such a standard in Swenson v. Sawoska, supra, 215 Conn. at 153, 575 A.2d 206, in which we concluded that the "sufficient other evidence standard ··· is too restrictive in that it does not encompass situations where the erroneously

admitted evidence, while not necessary itself to sustain the jury's verdict, may nonetheless have affected the jury's perception of the remaining evidence." (Internal quotation marks omitted.) Similarly, the fact that the defendant had the opportunity to take Strauss' deposition, to cross-examine him at trial, and to present rebuttal evidence, while indicative of the sufficiency of the evidence presented at trial to support the jury's verdict, does not demonstrate conclusively that the defendant was not harmed by the trial court's evidentiary ruling. As noted previously, the relevant question is whether the "ruling ··· [likely] would [have] affect[ed] the [trial's] result"; (internal quotation marks omitted) Ryan Transportation, Inc. v. M & G Associates, supra, 266 Conn. at 530, 832 A.2d 1180; and, as we stated in Swenson, this assessment can include merely whether the trial court's ruling "affected the jury's perception of the remaining evidence." Swenson v. Sawoska, supra, at 153, 575 A.2d 206.

Second, Strauss' opinion was the only evidence to support the plaintiff's principal theory of liability, namely, that the defendant's negligence in setting up the ladder, rather than the wind, was the proximate cause of the ladder's falling over. In this regard, Strauss' opinion regarding whether an 11.5 to 18 mile per hour wind could generate sufficient force to dislodge a ladder that was properly set up and free from defects, from its resting place against the roof of the defendant's building, was critical to the plaintiff's case. Simply put, the plaintiff could not make his case that the defendant's negligence caused the ladder in this case to fall unless he could establish that it was impossible for the prevailing wind on the day of the accident to knock over a ladder that had been set up properly and was in good condition. Once the wind was eliminated as a potential cause of the collision, the plaintiff

was able to argue to the jury, under a theory of *res ipsa loquitur*, that the second ladder must have fallen: (1) because the defendant negligently had set up the device; (2) because the defendant had erected a damaged and unstable ladder next to where the plaintiff was working; or (3) due to some combination of these two actions. Accordingly, Strauss' opinion as to the effect of the wind on a ladder that was properly set up and in good condition likely played a role in how the jury viewed the other evidence presented by the plaintiff regarding the defendant's negligence.[18] Moreover, during closing argument, counsel for the plaintiff noted that the "issue of the wind [was] critical,"[19] and read to the jury the opinion Strauss had offered during direct examination

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[18]We also note that Strauss' expert opinion was unique and was not cumulative of other evidence in the record. Indeed, the only other expert to testify concerning the wind was Cox, who did not testify about the effect of the wind on the ladder and limited his testimony to a discussion of the prevailing wind speeds in Meriden on the day of the accident, as well as to the likely appearance of such conditions to the average observer. By stipulation, the plaintiff's counsel stated: "Cox, is not going to testify as to causation, a wind speed knocking over this ladder. That's causation. I am not going to ask ··· Cox ··· whether a [certain] wind speed ··· will knock over a ladder."

[19]The trial court similarly acknowledged the critical nature of Strauss' testimony. Specifically, it instructed the jury as follows: "Thus, unless you find it proven, by a preponderance of the evidence, that the wind wouldn't have blown over a ladder in good condition properly set up, [the] plaintiff's case fails, and you must return a defendant's verdict for each defendant."

regarding the effect of the wind on a properly set up ladder.[20] Indeed, the plaintiff devoted a significant portion of his closing argument to Strauss' opinion about the prevailing winds on the day of the accident. His emphasis on Strauss' opinion about the wind further suggests that Strauss' opinion affected the jury's evaluation of the remaining evidence presented at trial.

The judgment is reversed and the case is remanded for a new trial.

In this opinion the other justices concurred.

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[20]Specifically, during closing argument, counsel for the plaintiff emphasized certain portions of Strauss' testimony by reading from the transcript as follows:

"Question: 'Mr. Strauss, the question that we left off with on Friday was, would a properly set up ladder with no defects in ··· Meriden with a ··· sustained [wind] speed of approximately 11.5 miles per hour be knocked over based upon the wind? Again, assume proper set up and no defects.' Answer: 'In my opinion it would not be overturned.' ··· Next question··· 'Would a properly set up ladder with no defects in ··· Meriden [leaned] against the side of a building, again, the same twenty-eight foot ladder on the side of a building with a five second interval or gust of wind at ··· eighteen miles an hour cause this properly set up, nondefective, extension ladder to fall over?' Answer: 'In my opinion, it would not.' "

Superior Court of Connecticut,

Judicial District of New Haven

DAVID PRENTICE

v.

DALCO ELECTRIC, INC., ET AL

NO.: CV010276254S

Feb. 17, 2005

Brignole & Bush, LLC, Hartford, for David Prentice.
Montstream & May, LLP, Glastonbury, for B.G. Graphics Inc.
Mulvey, Oliver, Gould & Crotta, for Dalco Electric Inc and One Twenty Five Research LLC.

STEPHEN F. FRAZZINI, Judge.

The defendants Dalco Electric, Inc., and 125 Research, L.L.C., have moved to set aside the verdict rendered by a jury and accepted by the court on March 12, 2004, awarding the plaintiff damages of $1,200,000 against Dalco and instead enter judgment for the defendants. The gravamen of their motion is that the court improperly (a) permitted two experts to testify, without whose evidence they claim that there was insufficient evidence to sustain a plaintiff's verdict, and (b) submitted the case to the jury on a theory of res ipsa loquitur. For the reasons explained below, their motion is denied.

I - SUMMARY OF FACTS

On March 16, 2000, the plaintiff was an employee of BG Graphics, which had been hired by the defendant to construct and install a sign on the front of the building where Dalco's

office is located. The building is owned by the other defendant, 125 Research. The plaintiff arrived at Dalco that day with Ben Gagliardi, one of his employers at BG Graphics, to install the sign. He later fell to the ground and suffered severe injuries after a ladder owned by Dalco fell over and toppled a ladder on which plaintiff was standing while making marks on the building as to where to place the sign. The plaintiff brought this action to recover damages for those injuries.

All four persons on the scene that day denied having set up that other ladder. The plaintiff offered expert testimony from a meteorologist, Robert Cox, that the National Weather Service measures wind velocity at the Meriden municipal airport, some distance from the Dalco office. A Weather Service report of wind speed readings at the airport that day showed maximum prevailing wind speeds, lasting at least two minutes, of 11.5 miles per hour and maximum wind gusts, lasting at least five seconds, of 18 miles per hour. Melvin Strauss, an engineer called as an expert witness by the plaintiff, testified that a properly setup ladder in good condition will not fall without application of sufficient external force. Strauss testified that winds of these speeds would not supply sufficient external force alone to knock over a properly setup ladder in good condition.

II - ISSUES PRESENTED

The defendants challenge the court's decision to admit expert testimony from Strauss and Cox. They claim that Cox's testimony about wind speeds at the municipal airport was not relevant to the site where the plaintiff's injuries occurred and that Strauss' testimony did not meet the threshold

admissibility standard for assessing the reliability of the methodology underlying expert scientific testimony, as required by *State v. Porter,* 241 Conn. 57, 698 A.2d 739 (1997), cert. denied, 523 U.S. 1058, 118 S.Ct. 1384, 140 L.Ed.2d 645 (1998).

The defendants also claim the court improperly charged the jury on res ipsa loquitur because plaintiff failed "to establish that the defendants' negligence was the only reasonable explanation for the plaintiff's injuries [and] that the defendants retained control over the ladder." (Def.s' Motion to Set Aside, p. 2.)

Finally, defendants claim that the verdict was against the weight of evidence and excessive.

III - DISCUSSION

A. Strauss's Testimony

1. The Porter Standard

In *State v. Porter,* the Connecticut Supreme Court adopted the rule enunciated by the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.,* 509 U.S. 579 (1993) for admissibility of scientific evidence: "scientific evidence that forms the basis for [an] expert's opinion must undergo a validity assessment to ensure reliability" before being submitted to the jury. *Hayes v. Decker,* 263 Conn. 677, 684, 822 A.2d 228 (2003). That validity assessment requires the trial court to assess whether "the reasoning or methodology underlying the [scientific theory or technique in question] is scientifically valid and ··· that reasoning or

methodology properly can be applied to the facts in issue." *Daubert v. Merrell Dow Pharmaceuticals, Inc., supra,* 509 U.S. at 592-93.

The *Porter* court did not, however, specify what types of "scientific evidence" are subject to the validity assessment. As the court later explained in *State v. Reid,* 254 Conn. 540, 546, 757 A.2d 482 (2000), "we recognized that *Daubert's* vagueness as to how and when to apply the factors of the test was necessary ··· In order to maintain flexibility in applying the test, we did not define what constitutes 'scientific evidence.' " (Citations omitted.). In *Hayes v. Decker, supra,* 263 Conn. at 687, the court expressly pointed out that "[a]lthough this court in *Porter* explicitly adopted the *Daubert* test to determine the admissibility of scientific evidence ··· we did not explicitly overrule Connecticut precedent regarding the evidence to which such a test should apply." As the Appellate Court recently noted in *Message Center Management v. Shell Oil Product,* 85 Conn.App. 401 (2004), " *Maher v. Quest Diagnostics, Inc.,* [269 Conn. 154, 847 A.2d 978 (2004)] ··· established that what is to be considered as scientific must be assessed on a case-by-case basis." *Id.,* at 422, fn. 12.

In *Maher v. Quest Diagnostics, Inc.,* our Supreme Court recently discussed which cases do and do not require the court to exercise *Porter's* gatekeeper role: "the standard articulated in *Porter* applies generally to scientific evidence, unless that scientific evidence is so well established that a threshold admissibility analysis is rendered unnecessary." *Id.,* at 168, fn. 19. The court then provided some guidance as to the nature of these other types of cases for which the *Porter* assessment is not necessary:

[S]ome scientific principles have become so well established that [a threshold admissibility] analysis is not necessary for admission of evidence thereunder. Evidence derived from such principles would clearly withstand [such an] analysis, and thus may be admitted simply on a showing of relevance. Thus, we exclude from the *Porter* standard the very few scientific principles that are so firmly established as to have attained the status of scientific law and properly are subject to judicial notice.

(Citations omitted; internal quotation marks omitted; internal alterations omitted.) *Id.*, at 169. In a footnote, the court in *Maher* further described this type of evidence:

[C]ertain types of evidence, although ostensibly rooted in scientific principles and presented by expert witnesses with scientific training, are not "scientific" for the purposes of our admissibility standard for scientific evidence, either before or after *Porter* ··· [E]vidence, neither scientifically obscure nor instilled with an aura of mystic infallibility which merely places a jury in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge is not the type of scientific evidence within the contemplation of *Porter*, and similarly was not within the ambit of our standard for assessing scientific evidence prior to *Porter*.

··· [E]vidence, even evidence with its roots in scientific principles, which is within the comprehension of the average juror and which allows the jury to make its own conclusions based on its independent powers of observation and physical

comparison, and without heavy reliance upon the testimony of an expert witness, need not be considered "scientific" in nature for the purposes of evidentiary admissibility.

(Citations omitted; quotation marks omitted.) *Id.*, at 170-71, fn. 22.

The *Maher* court cited *State v. Reid, supra,* and *State v.. Hasan,* 205 Conn. 485, 534 A.2d 877 (1987), as examples of cases involving evidence of a scientific nature not requiring a *Porter*-type validity assessment. In *State v. Reid,* an expert testified about the visible characteristics of, and similarities between, hair from the defendant and hair recovered from the victim's clothing and displayed enlarged photographs of the two samples to the jury. The court held that

[t]he jurors were free to make their own determinations as to the weight they would accord the expert's testimony in the light of the photograph and their own powers of observation and comparison. The jurors were not subject to confusing or obscure scientific evidence, but were able to use the testimony to guide them in their own determination of the similarity of the two hairs.

Id., at 547-48.

In *State v. Hasan,* the prosecution offered testimony from a podiatrist that sneakers recovered from the defendant's bedroom belonged to the defendant. The podiatrist testified that "it is common pediatric practice in the treatment of foot ailments to assess the suitability of a patient's shoes for his feet." *Id.*, at 492. The podiatrist also testified that "with wear, shoes conform to the contours of the foot and that the foot's characteristics are manifested in the outline of the shoe." *Id.*,

at 492-93. He then testified, based on his physical examination of certain sneakers linked to the crime and the feet of the defendant, that the particular sneakers belonged to the defendant. The defendant claimed that this testimony was improperly admitted because not shown to comply with the then-prevailing *Frye* standard of general acceptance in the scientific community.

Whether the *Frye* standard governed the case was important because the podiatrist admitted that there was no science within the field of podiatry for matching sneakers to people and that he had not performed any blind studies or conducted research in the area. In concluding that the podiatrist testimony in that case need not meet the *Frye* test, the court went back to the very reason why courts impose limits on scientific evidence: the normal human tendency of lay jurors to be overly influenced by scientific evidence beyond their own ken. "The *Frye* test finds its rational basis in the degree to which the trier of fact must accept, on faith, scientific hypotheses not capable of proof or disproof in court and not even generally accepted outside the courtroom." *People v. Marx*, 54 Cal.App.3d 100, 110, 126 Cal.Rptr. 350 (1975), cited in *State v. Hasan, supra*, 205 Conn. at 490. As our Supreme Court itself said,

Frye contemplates those situations in which the evidence sought to be admitted is beyond the understanding of the ordinary juror who must sacrifice his independent judgment in deference to the expert. Among the dangers created by such scientific evidence is its potential to mislead lay jurors awed by an aura of mystic infallibility surrounding scientific techniques, experts and the fancy devices employed.

(Citations omitted; quotation marks omitted.) *Id.*

The *Hasan* court noted two types of cases where expert evidence is not subject to the risk that jurors will be overly swayed by expert evidence and thus unable to exercise their own independent judgment. The court described one of those types as "cases in which the method used by the expert was a matter of physical comparison rather than scientific test or experiment." *Id.* The *Maher* court identified *State v. Reid,* discussed above, where an expert compared two hair samples that the jurors were also able to compare to guide them in their own determination of the similarity between the two, as an example of this first type of case.

The *Hasan* court described the case before it as an example of another type of expert evidence not subject to *Frye:* "where established techniques were applied to the solution of novel problems." *Id.* In both such instances, the court explained, the jury is in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge. Furthermore, where understanding of the method is accessible to the jury, and not dependent on familiarity with highly technical or obscure scientific theories, the expert's qualifications, and the logical bases of his opinions and conclusions can be effectively challenged by cross-examination and rebuttal evidence.

Id. Although noting the lack of scientific studies or research to corroborate the podiatrist's testimony, the court noted that the jury could assess his testimony adequately on its own: His conclusions relied on no advanced technology, nor did he employ scientifically sophisticated methods, the

understanding of which lies beyond the intellectual powers of the ordinary layperson. The jury was not required to accept blindly the merit of his conclusions or methods. It had before it the same sneakers which had been examined by the podiatrist and, during the course of the trial, had seen the defendant try them on and walk in them. The value of Rinaldi's expertise lay in its assistance to the jury in viewing and evaluating the evidence. Cross-examination exposed the jury to the lack of literature pertaining to matching shoes to feet and to the absence of studies or research in this area by Rinaldi or others. His credentials and methodology were before the jurors, who were competent to assess the reliability of the evidence and who could freely accept or reject his conclusions.

Id., at 494.[1]

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[1]The recent case of *Message Center Management v. Shell Oil Products,* 85 Conn.App. 401 (2004), is another example of evidence with "its roots in scientific principles," but admissible without a *Porter* analysis because it is "within the comprehension of the average juror [···] allows the jury to make its own conclusions based on its independent powers of observation and physical comparison, and without heavy reliance upon the testimony of an expert witness, [and therefore] need not be considered 'scientific' in nature for the purposes of evidentiary admissibility ." *Id.*, at 423, citing *Maher v. Quest Diagnostics, Inc., supra,* 269 Conn. at 170-71 n. 22. In the *Message Center* case, plaintiff offered expert testimony from its bookkeeper on a "statistical method of inferring lost profits by use of past, similar sales statistics by the plaintiff." 85 Conn.App. 420. The court held that this testimony was not subject to a *Porter* analysis:

There can be little uncertainty over the application of the statistical theory posited by the plaintiff as a measure of

damages. It was relatively simplistic and was well explained by the plaintiff's witnesses. This court, in fact, fails to see how one would need a trained statistician to testify as to its application. [The bookkeeper's] testimony was "expert" in nature because she had experience in negotiating contracts and knew how the wireless communications technology and business worked, an experience unique from that of a layperson. Thus, her testimony was reliable, although she was not a statistician and the testimony was not scientific.

Id., at 423.

Two years earlier, in *Hayes v. Decker, supra,* 263 Conn. at 677, the Supreme Court approved a cardiologist's expert testimony that "although the discontinuation of the plaintiff's blood pressure medication did not cause his heart attack, it did cause his blood pressure to rise and resulted in more tissue damage than otherwise would have occurred had he not stopped taking the medication." *Id.*, at 681. The expert had based his testimony on generally accepted views within the scientific community that "1) an increase in blood pressure causes an increase in the heart's demand for oxygen; (2) oxygen deprivation to the heart causes heart tissue death; and (3) increased blood pressure during a heart attack causes increased heart tissue damage." *Id.*, at 688-89. The court held that

This is not the type of "junk science" that *Porter* is intended to guard against. Nor are these principles "obscure scientific theories ··· that had the potential to mislead lay jurors awed by an aura of mystic infallibility surrounding scientific techniques, experts and the fancy devices employed." Rather, these are well established principles of the scientific community to which *Porter* simply does not apply.

(Citation omitted; internal quotation marks omitted.) *Id.*, at 689.

The analysis of the court in *Hasan* is entirely consistent with the reason the court in *Porter* adopted the judicial role of gatekeeper for scientific evidence:

[W]e first note the concern expressed by many authorities that juries will be overwhelmed by complex scientific evidence and will give such evidence more weight than it deserves.
...
[J]uries mainly have to rely on in-court testimony for their understanding of scientific evidence; that is, they are largely dependent upon the presentations of the parties and their experts. There is evidence, however, that expert presentations

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Similarly, in *State v. Sherman,* 38 Conn.App. 371, 410-11, 662 A.2d 767, cert. denied, 235 Conn. 905, 665 A.2d 905 (1995), the court concluded, as it later noted in *Hayes v. Decker, supra,* 263 Conn. at 688, that " *Frye* did not apply to expert testimony on time of death based on generally accepted principles of pathology and general expertise in field of pathology."

The weight to be accorded Galvin's estimate, however, is something the jury could determine because direct and cross-examination revealed that her estimate as to the effect of the temperature was a hypothesis and not dependent on established standards. The jury's understanding of this fact, and of Galvin's method, was not dependent on familiarity with highly technical or obscure scientific theories. Thus, because the jury was in a position to weigh the probative value of the testimony without abandoning common sense and sacrificing independent judgment, we conclude that the trial court did not abuse its discretion in admitting Galvin's testimony into evidence.

(Citation omitted; internal quotation marks omitted.) *State v. Sherman, supra,* 38 Conn.App. at 411-12.

may often be misleading and, at the same time, that cross-examination of experts may often be difficult and ineffective in bringing out flaws in the expert's reasoning.

...

Although the extent to which juries give scientific evidence undue deference is uncertain, the potential risk can be greatly reduced simply by allowing the judge, as the participant in the judicial process with both the greater access and ability to gather relevant information, to exclude wholly invalid scientific testimony altogether. Moreover, a trial judge who does admit scientific evidence will be in a better position, by virtue of the knowledge gained during the preliminary assessment, to conduct the trial and instruct the jury in such a way as to minimize the risk that jurors will give that evidence undue deference.

(Citations omitted; quotation marks omitted.) *State v. Porter, supra,* 241 Conn. at 70-74. The ultimate purpose of the *Porter* gateway admissibility screening is for "trial judges to minimize, to the extent possible, the confusion and prejudice that scientific evidence may generate." *Id.*, at 73, fn. 18.

2. The Porter issue here.

The defendant concedes that Strauss's testimony that a properly setup ladder will not fall over but for the application of external force was uncontroversial common sense not requiring a *Porter* analysis. (Def.s' Compliance with Order for Supplemental Briefing, at 2.) [2] They assert, however, that the

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[2] Although they claim that this testimony "was within the jury's competence to understand without expert evidence," Defs.' Motion to Set Aside, at 2, they are not here challenging the admission of that testimony.

court improperly admitted Strauss's testimony that the winds of 11.5 or 18 miles per hour wind would not provide sufficient force to knock over a properly setup ladder in good condition. They claim that this testimony "improperly relied on subjective judgments ··· rather than on objectively verifiable criteria, and should have been precluded because Strauss could offer no data or methodology in support of his conclusions." (Quotation marks omitted.) (Def.s' Supp. Reply, at 6.) They thus argue that the court erroneously failed to exercise the gatekeeper function required for scientific evidence by *Porter* to exclude the evidence.

The plaintiff claims, on the other hand, that "the engineering principles used by Strauss were so basic, fundamental, rudimentary and dealt with such low level forces on common objects that there was no need for experimentation and testing." (Pl.'s Short Reply to Def.s' Supp. Brief) The plaintiff thus attempts to locate Strauss's testimony within the category of evidence that does not require a *Porter* validity assessment.

The question this case raises, therefore, is whether, in the context of the facts of this case, Strauss's testimony that wind speeds of 11.5 or 18 miles per hour would not knock over a properly setup ladder in good condition was "scientific evidence" subject to a *Porter*-type validity assessment by the court. There was extensive evidence that a ladder should not be used in "high" or "strong" wind [3] and testimony from three

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[3]Strauss testified that the American Ladder Institute has adopted safety standards and requirements for ladders, approved by the American National Standards Institute ("ANSI"), that "promulgate what you are supposed to do or not supposed to do with regard to ladders;" (T.2-27-04, at 20); and establish a

of the four persons on the scene that day supporting a jury finding that the winds that day were neither high nor strong.[4]

"standard of care." *Id.*, at 44. He told the jury that the federal and state government "use these standards in order to assist everybody in understanding what they should do" when using ladders. (*Id.*, at 19.) The ANSI ladder standards, introduced into evidence, require that ladders contain a warning label advising "Do not use ladder in high winds."

The ladder on which the plaintiff was standing that day had such a warning label stating, among other warnings, "Do not use during high winds or during storm."

The ladder that fell over onto the plaintiff's ladder also had a partially obscured warning label stating "Do not use in high winds ···" The wording next to "winds" was partly covered by drops of paint; the final word of the sentence was "storm."

The plaintiff introduced into evidence a summary of OSHA regulations, which Strauss told the jury were regulations of a federal agency governing "how people are to conduct business in the workplace." *Id.*, at 45. That summary contained as one of its "general safety rules for all ladders," the directive: "Never setup or use a ladder in a high wind ···"

Other exhibits said the same thing: "Never use a ladder in a strong wind." (Ohio State University Extension Fact Sheet on "Purchase and Proper Use of Ladders"); "Do not use a ladder in a strong wind." (Online Ladder Safety Advice from the Mackay Company .)

[4]The plaintiff testified that he had no problems with the wind that day. He testified that when he arrived at the defendants' premises he carried the sign off the truck in which he and Gagliardi had arrived there to the front of the building. He

Although there was some evidence to the contrary, [5] the jury was entitled to find, from the testimony of those three, that the wind conditions that day could not be described as either high or strong. The meteorologist, Cox, testifying about the effect of the wind speeds that day on objects on the ground, said that "most people wouldn't really even notice a ten mile per hour wind ··· [, which] might move the leaves on trees." (Cox testi, 23) He stated that winds of 11.5 or 18 miles per hour would cause small branches on a tree to move a little and light objects on the ground, such as paper, to move but not sturdy

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described the sign that his employer had made for the defendant Dalco as having dimensions of approximately four feet by twelve feet and weighing between 20 and 30 pounds. He said it was somewhat flimsy and hard to control and balance. He testified that wind can make it difficult to carry a sign by blowing the sign like a giant sheet on a kite but that on this day he had no trouble carrying the sign from the truck. He said that the wind conditions that day did not attract his attention. When asked on cross-examination whether he felt the wind that day, Gagliardi testified that "I don't remember. I don't think I felt the wind blowing. I am not, no"; Gagliardi testi., 69; and that it was a "little windy" (*Id.*, at 113) that day. Luft, a vice-president of Dalco and partner in 125 Research Parkway, LLC, testified that it was a nice day and maybe a little breezy.

[5]Donahue testified on direct examination by defendants that it was clear and breezy and he felt a gust of wind just before the ladder fell over, but he admitted on cross-examination having said at a deposition that he could not recall wind conditions that day. Gagliardi admitted having said shortly after the accident that the wind blew over the ladder, but he explained statement at trial by saying that he just "assumed that was the way the ladder went over, just it was just standing there by itself. What else would cause it to go over." Gagliardi testi., 69

or heavy objects on the ground. He said wind of 11.5 m.p.h. would cause chimney smoke not to go straight up in the air but to rise at a "bit of an angle"; Cox testi., 103; and that a wind gust of 18 m.p.h. would make the angle of inclination "a little bit sharper." *Id.*, at 59.[6] Although the court precluded Strauss from testifying whether sustained wind gusts of 18 m.p.h. are considered "high wind" because the plaintiff had not disclosed such an opinion from Strauss, Cox testified that the National Weather Service issues a high wind watch or high wind warning when "winds in the fifties were expected"; *id.*, at 6; and high wind advisories when wind of 39 m.p.h. or more is expected.

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[6]Cox testified that with a wind speed of 11.5 miles per hour "if you looked closely, you'd probably notice some of the leaves on trees would move back and forth a little bit. Most objects on the ground wouldn't be affected by something like that." (Cox testi., 55) "It may also move small branches on the tree. It may pick up light object on the ground, such as paper. And you could also notice that if you look at a smoke stack, where smoke was coming out if it, instead of coming straight up, it would tend to come out at a bit of an angle. It would not be strong enough to move sturdy or heavy objects on the ground." *Id.*, at 103. A wind gust of 18 miles per hour "would tend to have the same effects, only to a slightly greater degree. So the leaves would move a little bit more. The smaller branches would move a little bit more. It might pick up a little bit more paper. It still wouldn't be affecting sturdy and heavy objects." *Id.*, at 102 "If you were looking closely, the leaves on the trees that may have been moving a little would move a little bit more. Perhaps some of the smaller branches even would move a bit. If you were looking at a chimney that had smoke coming out of it, the angle of that would become a little bit sharper." *Id.*, at 59.

Defense counsel extensively cross examined Strauss on the basis for this testimony. Strauss conceded that he had not done wind tunnel studies or performed mathematical calculations as to the forces applied on the ladder that day. He did not determine the weight of the ladder or the coefficient of friction of the ladder placed against the building. He did not test or calculate wind vectors or acceleration or calculate the degree of force necessary to blow the ladder over. Instead, he testified that he based his conclusion that those wind speeds could not blow over a properly setup ladder in good condition on his years of experience. The defendants claim, in essence, is that relying on "years of experience" rather than on specific experimental studies or scientific research amounts to mere "subjective judgment" rather than a permissible expert opinion.

Yet the evidence belies the defendants' claim and shows, instead, that Strauss's opinion was, similar to that of the podiatrist in *Hasan,* the application of established techniques regularly used by expert-here, the evaluation of the effect of wind forces on objects on the ground-to a particular situation. Strauss testified that he was a professional engineer and accident reconstructionist. The court qualified him as an expert, without objection, in mechanical and forensic engineering. As an engineer, he had prior experience assessing ladder accidents and evaluating whether the wind would overturn an object on the earth's surface or cause it to close. (Strauss testi., 3-2-04, 141-42.) He testified that he has examined "a couple of dozen" ladders in this capacity and that the application of external forces to the ladder is a factor he has had to consider in every single case.

In this case, just as in *Hasan,* thorough and lengthy cross-

examination put the jury "in the position to weigh the probative value of [Strauss's] testimony without abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge." *State v. Hasan, supra,* 205 Conn. at 490. Strauss's opinion did not depend on highly technical or obscure scientific theories; nor was it the infamous "junk science." The defendant extensively challenged the logical bases of his opinions and conclusions in rigorous and lengthy cross-examination. Cross examination exposed to the jury that he did not conduct any scientific or experimental tests to arrive at his opinion. "His conclusions relied on no advanced technology, nor did he employ scientifically sophisticated methods, the understanding of which lies beyond the intellectual powers of the ordinary layperson." *Id.,* at 494.

Strauss's opinion that 11.5 or 18 m.p.h. winds would not provide sufficient external force to knock over a properly setup ladder in good condition also coincided with the other evidence before the jury about wind and the use of ladders-Cox's testimony describing the effect of such winds on objects on the earth's surface, the use of the term "high wind" by the National Weather Service for winds greater than 39 m.p.h., and the various documents and warning labels on the two ladders specifying not to use ladders in high or strong winds.[7]

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[7]On direct examination Strauss said that winds coming from the side pose the most danger to ladders. Cox testified that the wind accelerates when it flows around an object in its path. Pursuing these two points together, the defense on cross examination asked "So, if I understand correctly the wind was blowing right at these ladders, isn't that right?" (Strauss testi., 3/2/04, 161. Strauss replied that "That is not true," *id.*, because of a scientific

principle known as the Venturi effect, which meant that the particular ladders set up at the Dalco building that day would not suffer the full force of ambient wind speeds that day because of where they were set up. The wind that day came from the southwest. The ladders were set up at the northeast corner of the building.

We are talking what is called fluid mechanics and air is even though it is a gas it acts like a fluid. What will happen is that it comes towards the building and then it hits the wall and then comes over the building and at the same time the air will find a way around the building and join back on both sides of the building. What happens on this side of the building [referring to the northwest side where the ladders were located] is there is less pressure on this side of the building particularly since these ladders except for only [one] foot [the portion of the ladder extending above the roof line] are directly below the main path of the wind. In other words, these ladders are shielded from the wind.

Id., at 161

Thus, according to Strauss, the Venturi effect is a principle explaining the flow of liquids-and the wind functions as a liquid in this respect-around objects. When the wind encounters a building, it accelerates in its flow around the building. After separating to flow around the object, the winds rejoin the general air mass at a location on the other side of the object that Strauss testified is called the "confluence point;" but the position of the two ladders near the building put them out of the "main path of the wind. "The principle is that when you constrict flow, in any manner, that the fluid, in this case the air, will speed up ··· [T]he object that this fluid is going over, creates a shadow (Strauss testi., 3/3/04, 157-48.) He explained that this "shadow area" is an area where the wind velocity is at a slower speed because shielded from the wind. He testified that the ladders, next to the northeast corner of the building, were in the

With ample evidence that a properly setup ladder in good condition will not topple from winds unless they are high or strong, Cox's testimony describing the effect of wind at 11.5 or 18 miles per hour, coupled with the testimony of fact witnesses about the wind that day, would have been sufficient for the jury to find that the wind speeds that day would not have toppled the ladder if it had been in good condition and properly set up.

The court therefore concludes that Strauss's opinion testimony did not require a preliminary gatekeeper *Porter*-type validity assessment. The opinion testimony he provided here regarding the effect of certain wind speeds on a properly setup ladder in good condition was supported by other evidence, thoroughly tested on cross-examination, and not the sort of scientific evidence that would place the jury in the position of "abandoning common sense and sacrificing independent judgment to the expert's assertions based on his special skill or knowledge ···" *Maher v. Quest Diagnostics, Inc., supra,* 269 Conn. at 170-71, fn. 12.

3. Defendants' claim that Strauss's testimony was "hypothetical" and speculative

In their memorandum in support of the motion to set aside the verdict, the defendants also claim that the court improperly allowed the plaintiff to try portions of his case "in the hypothetical ··· because no foundation was laid for this evidence." *Id.*, at 8-9. They use this argument to challenge Strauss's testimony that a ladder will not fall but for one of

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"shadow area" of the wind and hence the wind velocity there would have been less than in the "general air mass."

three things occurring independently or conjointly-improper setup, defect, or external force.

Because no facts were offered to establish that the ladder was set up incorrectly and because Strauss testified that the ladder was capable of supporting its own weight and probably that of a human being, there was no factual support ever laid for the hypothetical so that its use was misleading and all the evidence that proceeded from it should have been stricken.

Id., at 9.

Such evidence, however, was a legitimate part of the plaintiff's case to proof causation circumstantially. For example, although there was no direct evidence that the ladder was set up improperly-indeed, no one there that day admitted setting it up, the testimony of Strauss and Cox together provided a basis for inferring negligence on the defendants' part. Strauss testified that the ladder, though defectively repaired, could stand on its own. Cox described the effect that winds of 11.5 and 18 m.p.h. would have on objects on the earth's surface. Their testimony was sufficient to infer that the wind that day would not have blown that ladder over if set up properly and in good condition.

B. Cox's Tesimony

Meteorologist Robert Cox testified that the National Weather Service measures wind speed at the Meriden airport and reports two types of wind speed data: (i) "sustained wind," defined as "a measured wind speed for an interval of time that exceeds two minutes," and (ii) "wind gusts," defined as wind speed lasting five seconds or more. He testified without

objection that the highest sustained wind speed reported at the Meriden airport on the day the plaintiff was injured was 11.5 miles per hour, that this was the sustained wind speed at both 11:45 a.m. and 12:45 p.m. at the airport that day, and that the highest wind gust lasting at least five seconds at the airport that day measured 18 miles per hour at 12:15 p.m. (approximately 30 minutes before plaintiff fell from the ladder). When asked "with a reasonable degree of meteorological probability, whether [the airport data) is indicative of the weather in the Town of Meriden in its entirety?" Cox testified that "I believe that these records are representative of the general area, including the entire Town of Meriden." The plaintiff also introduced into evidence without objection a letter from Cox stating that the average wind speed for the wind was "about 6-12 miles per hour" and "[t]he peak wind gust that day (sustained for 5 seconds) was 18 miles per hour." In the letter, Cox attested that these readings were "a true and accurate account of the weather conditions in Meriden, Connecticut, within a reasonable degree of scientific certainty, on the day in question." (Pl.Ex.42.) The defendants neither objected to nor moved any of this testimony.[8]

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[8]The defendants' principal objection at trial to Cox's testimony pertained to his testimony about the effect of these wind speeds on objects on the ground. The plaintiff stipulated before trial that Cox would not offer direct evidence of causation. At trial defendants then objected to evidence about the effect of wind speeds on objects on the earth's surface because they claimed that such evidence was "direct evidence of causation." The court had deferred until trial ruling on a defense motion in limine to preclude testimony from Cox "as it pertains to the impact and effect of various wind speeds on the ground." The basis for that motion was that such testimony was "beyond the scope of his

The defendants' motion to set aside now claims that this testimony from Cox was "unfounded, unreliable, irrelevant and inadmissible and so not an aid to the trier of fact ···" (Def's Motion to Set Aside, at 2). More particularly, their motion claims that the data on which his evidence depended was for scientific value only for the site where the instrumentation used to collect the data was maintained, this was some distance from the site of the accident, and the foundation for his "opinion" that the wind as measured at the site of the instrumentation was the same throughout Meriden was entirely unseated by his evidence on cross-examination that winds do not follow geopolitical lines, that he did not know the compass direction of the site from the location where his data was collected; that winds can increase in force and speed as they come into contact with other winds and objects on the earth's surface and also move at higher speeds at higher elevations, and that he had no knowledge of the elevations either of the location of the instrument readings or of the site of the accident ···

Id., at 3.

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expertise as a meteorologist" and "not based upon scientific, technical or specialized knowledge." (Mem. In Support of Motion in Limine to Preclude Testi. Of Plaintiff's Expert Witness Robert B. Cox, 1.) They also claimed inadequate notice that Cox would offer such testimony at trial because of testimony he gave in his deposition. At trial the court held that testimony as to the effect of wind speeds was properly disclosed in advance of trial, outside the ken of the jury, and a proper subject for expert testimony.

This claim was not raised to the court at trial. The defendants did not object to the exhibit that contained Cox's letter attesting that wind speed readings at the Meriden airport accurately represented weather conditions in the City of Meriden that day nor object to or move to strike his testimony to that effect. They thus never presented the court with the issue that they now argue as a basis for setting aside the verdict. Although rigorous cross-examination certainly challenged that assertion, the evidence was validly before the jury and properly a subject on which Strauss could be questioned.

C. Res Ipsa Loquitur

"The doctrine of res ipsa loquitur applies only when two prerequisites are satisfied. First, the situation, condition or apparatus causing the injury must be such that in the ordinary course of events no injury would have occurred unless someone had been negligent. Second, at the time of the injury, both inspection and operation must have been in the control of the party charged with neglect." *Barretta v. Otis Elevator Co.*, 242 Conn. 169, 173-74, 698 A.2d 810 (1997).

Strauss's testimony that ladders, when properly set up and in good condition, are stable and will not fall over except upon application of sufficient external force provided part of the basis, in conjunction with other evidence, for inferring that defendants had been negligent. Plaintiff's evidence on the first component of res ipsa was that the wind that day would not have caused a properly setup ladder in good condition to fall over. This evidence served to negate nonhuman instrumentality as the cause of plaintiff's injuries. On the second element of res ipsa loquitur, control over inspection

and operation, the plaintiff offered evidence that the ladder had long been in the control of Dalco, that Dalco had improperly tried to repair a defective side rail with a missing diagonal brace by using a perforated angle iron, that the ladder as repaired was defective and violated the directive of ANSI standards not to attempt repairs to defective side rails, that the defect was visible and obvious to all, that this defect by itself would not cause the ladder to topple but might lessen the ability of the ladder to remain stable upon application of external force, that Luft and/or Donahue had been the ones who carried the ladder out from the back and set it against the wall, that Luft and/or Donahue had been standing near the ladder when it fell, and that neither plaintiff nor his boss had carried out that ladder, set it up, or been in control of the ladder.

Since the jury could have found that both setup and the condition of the ladder had been under Dalco's control and that nonhuman factors were not the sole cause for the ladder to fall, the jury had evidence providing the basis for a res ipsa loquitur instruction. The court thus submitted the case on a theory of res ipsa loquitur, charging the jury that if it found that the ladder would not have fallen over that day but for negligence and that inspection and operation of the ladder had been in control of a defendant, then it could draw an inference of negligence on that defendant's part. The defendants' motion to set aside the verdict challenges the res ipsa loquitur instruction on several grounds-that the accident could have occurred free of their negligence, plaintiff presented evidence of specific negligence that would preclude a res ipsa instruction, they did not have control over the ladder that caused plaintiff's injuries, and plaintiff failed to conduct a sufficient reasonable investigation.

The following additional facts are relevant to addressing this aspect of their motion to set aside the verdict. When the plaintiff and Gagliardi first arrived at Dalco that day to install the sign, Prentice first carried the sign to the front of the building. They next found Luft, who showed them where Dalco wanted the sign placed on the building. Gagliardi and the plaintiff testified that then they realized that the ladders they had brought would not reach high enough on the building to install the sign where Dalco wanted it. They walked to the rear of the building, where Luft offered a Dalco ladder for them to use. [9] Those three, plus, a 17-year-old Dalco apprentice, Keith Donahue, were the only persons at defendants' premises that day. After some discussion, all four walked to the front of the building. All four persons testified at trial that a Dalco ladder was carried from the back to the front and that this ladder later fell over and knocked over a ladder on which plaintiff was standing. All four also agreed that both ladders were placed against the building. At trial, however, each person denied being the one who carried out the ladder that knocked over the plaintiff's ladder or set that ladder up against the building. The plaintiff testified that Luft carried out the other ladder and set it up. Since these four

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[9]There were two extension ladders at the front of the building when the plaintiff was injured. All four persons there that day agreed that one of those ladders was the one with defectively repaired side rail. All four agree that this is the ladder that fell first. The testimony was not unanimous about the origin of the other ladder, the one on which the plaintiff was standing- Gagliardi testified that this was one of his company's ladders and that Dalco only supplied one ladder. The other three testified that Dalco supplied both ladders. But that factual disagreement had no significance for the outcome of this case.

were the only people there, one of the four obviously carried the Dalco ladder from the back to the front and one of them set it up against the building. If the jury found the testimony of the plaintiff and Gagliardi credible that neither one of them had carried out or set up that ladder and/or the plaintiff's testimony that Luft carried the ladder out and set it up [10FN10]

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[10]Gagliardi and the plaintiff both testified that it takes two people to install a sign. They also testified that Gagliardi had initially, when they arrived at the building, planned to assist in the sign installation and thus they brought two step ladders from their truck to the front of the building right after arriving. They testified that when they thereafter met Luft to find out where on the building to install the sign, he showed them a spot higher up than their step ladders would reach. They both also testified that Gagliardi never climbs on extension ladders and that, once they found out that the step ladders would not work, Gagliardi told Luft that they would have to come back later to install the sign using a truck. Both plaintiff and Gagliardi also testified that, after deciding not to install the sign that day, Gagliardi told the plaintiff to measure and mark on the building where the sign would go so that when they returned with a truck they would know where to install the sign. According to them, they only needed one ladder for the plaintiff to do that.

There was thus some reason for the jury to credit the testimony from the plaintiff and Gagliardi that they did not bring out or set up the second ladder. Donahue testified that Luft's father, the chief principal in Dalco, had said earlier that day that he wanted the sign installed that day and that was the reason he and Luft were there that day. According to the plaintiff, after Gagliardi told Luft their ladders were too short and that he wouldn't go up a regular extension ladder, Luft offered to help them install the sign and brought out the second ladder. The jury might have inferred that Luft, in a desire to accede to his father's expressed

(and disbelieved the denials of Luft and Donahue that neither Luft nor Donahue had done so), the jury could reasonably have inferred that Luft or Donahue had carried that ladder out and set it up against the building.

Plaintiff's expert witness Melvin Strauss testified that he could not identify the cause of the accident. Strauss testified that, without information about the setup of that ladder that day, he could not give an expert opinion on what caused the ladder to fall over. An improperly setup or defective ladder, he testified, might require less force to be toppled than a properly setup ladder in good condition. He also testified that the ladder that fell over onto plaintiff's ladder was defective, because of an improperly repaired side rail, that he believed this defect contributed to the cause of the accident, but could not so testify to a reasonable degree of engineering certainty. He also testified that he believed the setup probably contributed to the fall, but he could not say how because of lack of information about the actual setup. He also ruled out the known winds that day having sufficient force to knock over a properly setup ladder in good condition.

1. Defendants' argument that plaintiff presented evidence of specific negligence that presented a reasonable explanation for the accident other than their negligence.

"Res ipsa loquitur instructions are appropriate when a plaintiff cannot prove with direct evidence the proximate

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desire to have the sign installed that day, brought the second ladder out and set it up against the building.

cause of an injury, and has shown that the only reasonable explanation for the incident is that the injury must be attributable to the defendant's negligence." *Pineau v. Home Depot, Inc.*, 45 Conn.App. 248, 257 (1997). The defendants make two related arguments that a res ipsa instruction was inappropriate because of the opinion testimony from plaintiff's engineering expert Melvin Strauss that the ladder that fell over onto plaintiff's ladder was defective because of an improperly repaired side rail. They point out that Strauss testified that the repairs to the ladder violated OSHA regulations that incorporate the ladder manufacturers' ANSI standards and that such evidence is "direct evidence of a breach of the standard of care." (Def.'s Mem. in support of Motion to Set Aside, 7.) They thus maintain that this evidence offered direct evidence of specific negligence on their part.

Similarly, they also argue that this evidence offered a reasonable explanation for the plaintiff's injuries other than their negligence: "of the three potential causes of a ladder's failing posted by Strauss, the only cause proved at trial was that the external force of the wind acting on the ladder could have been the sole cause of its fall ···" *Id.*, at 12. But the evidence on this point was not so neat as they claim. In fact, Strauss gave evidence supporting plaintiff on direct examination and supporting defendants on cross examination[11 FN11]. The questions posed to him on cross

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[11]Strauss testified on direct examination that winds of 11.5 or 18 miles per hour would not provide sufficient force to blow over a properly setup ladder in good condition. During a lengthy and rigorous cross-examination, however, Strauss said that he could not preclude the possibility that winds of such speed could knock over a properly setup ladder in good condition. On

examination, however, often involved double negatives or were convoluted, whereas those on direct examination tended to be simple and direct and there was ample other evidence supporting his testimony on direct. Here the evidence, viewed most favorably to the plaintiff, did not show direct causation and allowed the jury to find that the only reasonable explanation for plaintiff's injuries was negligence of the defendant.

The defendants' position seems to be that if the evidence, *viewed most favorably to the defendants,* shows direct causation or reasonable causes for the accident other than their negligence, then a res ipsa instruction is improper. Neither of the cases they cite for this proposition, however, supports their claim. In *Barretta v. Otis Elevator Company,* 242 Conn. 169, 698 A.2d 810 (1997), the plaintiff suffered injuries when an escalator she was riding stopped suddenly. A professional engineer testified that the escalator probably stopped because of a loose wire or a " 'gremlin,' a generic term for a minor malfunction that disrupts the operation of a mechanical system and that can be very difficult to trace." *Id.* Though negligence requires, at a minimum, that a defendant knew or should have known of the dangerous condition, there was no evidence that the defendant could have discovered either possible cause of the accident by a safety inspection or through reasonable maintenance. The court affirmed the trial court's refusal to charge on res ipsa because "[t]he doctrine of res ipsa loquitur does not extend to situations in which the plaintiff's own evidence provides no basis on which to

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redirect examination, he then again repeated what he said on original direct examination, and on re-cross examination repeated what he said previously on cross examination.

conclude that the defendant has been negligent and, in fact, suggests as the only possible cause of the accident factual scenarios that do not arise from the defendant's negligence." *Id.*, at 176. As the court explained, testimony of the plaintiff's expert, which was the only causation evidence presented at trial, specifically indicated that, in general, escalators such as the defendant's may stop for reasons unrelated to anyone's negligence, failed to establish any possibility that the plaintiff's injuries were caused by the defendant's negligence, and specifically indicated that the escalator stopped for reasons completely divorced from any negligence on the defendant's part ··· When, as in the present case, evidence on the question of causation is presented at trial, and *all such evidence affirmatively indicates that the accident inquestion would, in fact, have happened in the absence of anyone's negligence,* an instruction on the doctrine of res ipsa loquitur is inappropriate.

(Emphasis added.) *Id.*, at 177-78. In *Barretta,* there was thus no evidence linking the probable causes of the accident to negligence of the defendant.

In *Boretti v. Panacea Co.*, 67 Conn.App. 223, 786 A.2d 1164 (2001), the plaintiff suffered injuries after she slipped and fell in an icy parking lot owned by the defendants. The court upheld the trial court's refusal to instruct on res ipsa loquitur because "[v]iewing the evidence in the light most favorable to supporting the plaintiff's charge, we conclude that the plaintiff's injury could have occurred in the absence of negligence. In this case, the plaintiff could have fallen while exiting her motor vehicle for a variety of reasons, without any negligence on the part of the defendants." *Id.*, at 230. The court specifically noted that a trial court should charge on res

ipsa when requested by the plaintiff and when the evidence, viewed most favorably to the plaintiff, supports such an instruction:

A. trial court should instruct the jury in accordance with a party's request to charge if the proposed instructions are reasonably supported by the evidence ··· We therefore review the evidence presented at trial in the light most favorable to supporting the plaintiff's proposed charge.

Id., at 229.

Those two cases are quite different from the present one. Unlike *Barretta v. Otis Elevator Company,* all the evidence on causation did not indicate that the ladder would have fallen anyway. Rather, the evidence here was mixed and there were legitimate reasons, in the evidence, that the jury might find Strauss's testimony on direct examination credible, conclude that his contradictory statements on cross examination were the result of his being confused by or not understanding the questions, and thus reject the causation evidence favorable to defendants. Other evidence not only corroborated his testimony on direct examination but was sufficient proof independent of Strauss's testimony, that wind of 11.5 or 18 m.p.h. would not have caused a properly setup ladder in good condition to fall over. In the light of the wide range of documentary evidence, ranging from the voluntary ANSI standards adopted by ladder manufacturers to OSHA regulations incorporating those standards and governing the workplace to ladder warning labels that ladders should not be used in high winds, Cox's testimony describing the effect of winds of these speeds on objects on the ground and the testimony of the fact witnesses (viewed most favorably to the plaintiff, was sufficient for the jury to find that the winds were

not high that day and, hence, not a danger to the ladder. Thus the evidence, viewed most favorably to the plaintiff, supported a jury finding, by a preponderance of the evidence, that the wind was not the sole cause of the ladder falling and that negligence of the defendants was the most reasonable explanation for the plaintiff's injuries.

The defendants also argue that the meteorologist's testimony "concerning how a 11.5 m.p.h. wind will affect objects on the earth's surface was direct not circumstantial evidence of causation." *Id.*, at 8. Yet the plaintiff did not offer direct evidence from either Strauss or Cox explaining specifically how or why the ladder fell over. Strauss did testify that the ladder was defective and that the defect in the ladder weakened the ladder's stability. Although the defective repair might violate the standard of care, the evidence here does not show a causal link between that defect and the ladder falling. Strauss testified that the ladder could probably support the weight of a person. He further testified that a weakened or improperly setup ladder might require less external force to topple it. Since he did not know how the ladder had been set up that day, however, he said he could not give an opinion on how or why the ladder actually fell over. Viewed most favorably to the defendant, the testimony from Strauss thus did not show the specific means of causation-how the ladder fell over. Similarly, Cox's testimony about how wind of 11.5 or 18 m.p.h. affects objects on the ground supported a conclusion that the wind was not the sole cause for the ladder to fall, but was not specific evidence as to what in fact caused the ladder to fall over. If the evidence is viewed in the light most favorable to the plaintiff as *Boretti v. Panacea Co.* requires this court to do, a res ipsa instruction was not just appropriate, but, since requested by the plaintiff, required.

2. Defendants' claim that the evidence did not establish the element of control necessary for a charge on res ipsa loquitur.

The plaintiff was on the defendants' premises that day as an employee of an independent contractor hired by Dalco. Ordinarily, a defendant is not responsible for injuries sustained by an employee of an independent contractor or for injuries occurring as a result of activities or conduct in areas under the independent contractor's exclusive control. *Darling v. Burrone Bros., Inc.*, 162 Conn. 187, 196, 292 A.2d 912 (1972). The court thus instructed the jury that "when an independent contractor assumes control over the premises and its instrumentalities, such as a ladder here, the property owner is not responsible for injuries caused by the instrumentality if the independent contractor knew or ought to have known of its condition." The court further instructed the jury, however, on two long-accepted exceptions to the independent contractor rule: the first is when the employer retains control of the premises or portion thereof and its instrumentalities, such as the ladder, and the second is when the employer's own negligence is what caused the plaintiff's injuries.

See *Pelletier v. Sordoni/Skanska Construction Co.*, 264 Conn. 509, 518, 825 A.2d 72 (2003).

The court charged the jury that it could not find liability unless it found that the defendant had control over the ladder that fell and knocked over the plaintiff's ladder. Viewed most favorably to the plaintiff, the evidence of control by the defendant Dalco was that the ladder that first fell over had long belonged to Dalco and that Dalco had made the improper repair to the defective side rail. Someone obviously brought

the ladder from the back of the building to the front and set it up against the building. The plaintiff testified that Luft carried out and set up the ladder. The testimony of the plaintiff and Gagliardi denying that either of them brought that ladder from the back of the building to the front or set it up against the building, moreover, was sufficient for the jury to infer that one of the Dalco employees, either Luft or Donahue, brought the ladder out and set it up against the building. The plaintiff and Gagliardi both testified that the plaintiff was on a ladder and that Gagliardi was nearby providing support. Gagliardi said the other ladder was 8 to 10 feet away. This evidence was sufficient, viewed most favorably to the plaintiff, for the jury to find that Dalco, not plaintiff or Gagliardi, was in control of the ladder that fell on plaintiff's ladder when this accident occurred.

3. Defendants' claim that plaintiff did not conduct a reasonable investigation into the causes of his injuries.

The defendants also assert that an inadequate investigation by plaintiff into the causes for the ladder to fall precluded the court from instructing on res ipsa loquitur. The gist of their argument is that plaintiff's engineering expert Melvin Strauss "conduct[ed] no experiments, tests, calculations or studies" shows that the "plaintiff chose not to determine causation." (Def.s' Mem. in Support of Motion to Set Aside, 17.) Instead, they assert, the plaintiff improperly relied on res ipsa loquitur to establish what they chose not to prove. This was an argument that the defendants made to the jury as well.

Although Strauss acknowledged that he did not conduct scientific tests or perform various mathematical calculations,

he also gave a cogent reason for his not doing so. All four persons on the scene that day denied having set up the ladder that fell onto the plaintiff's ladder. Since he did not know the manner in which that other ladder was set up, he could not create an experiment or test replicating the situation that day. Tests or experiments would thus not have provided valid, or admissible, data on causation. Without information on the setup of the ladder that day, plaintiff was unable to prove how or why the ladder fell over. The plaintiff instead sought to preclude sole causes of nonhuman origin. Plaintiff then introduced evidence from which the jury might infer that if nonhuman instrumentality was not the sole cause for the ladder to topple, then the defendants were responsible, in whole or part, for its fall:

That the ladder was defective;

That although this defect might not affect the stability of the ladder if properly set up, it might make the ladder more susceptible, as Strauss testified, to fall if set up near or close to the "tip point."

That Dalco had been in control of the ladder before its use that day.

That Luft or Donahue brought that ladder out to the front and set it up.

That Dalco was, hence, in control of the instrumentality that fell onto plaintiff's ladder and that caused his injuries (in whole or in part aided by the wind).

Under these circumstances, therefore, while the defendants'

assertion that the plaintiff did not conduct an adequate investigation was certainly an argument they could make to the jury (and did vigorously), the evidence viewed most favorably to the plaintiff also permitted the court to instruct on res ipsa loquitur.[12]

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[12]The defendants also argue that the court improperly charged on res ipsa loquitur because "the defendants had not been properly put on notice until well after the jury was impaneled that the plaintiff intended to proceed on that theory." Def.'s Supp. Motion to Set Aside the Verdict, 3. Although the defendants made this argument pretrial, they did not raise it post-judgment until more than ten days after acceptance of the verdict. It is thus not now properly before the court and the court here will not rule on the claim. Practice Book Section 16-35 provides, in part, that "motions to set aside a verdict ··· must be filed with the clerk within ten days after the day the verdict is accepted; provided that for good cause the judicial authority may extend this time."

The court notes, however, that it has long been the law that a defendant must be put on notice that plaintiff seeks to rely on a theory of res ipsa loquitur. Although their motion to set aside cites *Gilbert v. Middlesex Hospital,* 58 Conn.App. 731, 755 A.2d 903 (2000) and certain trial court decisions for the proposition that the complaint must put a defendant on notice that plaintiff intends to rely on res ipsa, a plaintiff need not plead res ipsa as a separate and distinct cause of action. See *Gifford v. City of Meriden,* 49 Conn.Sup. 157 (2004). After plaintiff's final expert disclosure explicitly disclosed plaintiff's intention to rely on res ipsa, the court ordered an additional deposition of plaintiff's expert, at plaintiff's cost, to provide defendant with an opportunity to explore this issue. At the time of the order, the court also stated: "then I'll leave it to [defense counsel] as to make any further claims after that deposition is concluded."

D. Defendants' claim that the verdict was against the weight of evidence.

The defendants' motion to set aside claims that the verdict is against the weight of evidence for three reasons. First, they claim, "no evidence was offered to establish the factual foundation for the expert's hypothetical opinion concerning the three potential causes of a ladder's fall." (Motion to Set Aside, 4.) The court disagrees. Plaintiff's engineering expert explained the three reasons that a ladder will fall over (defect, improper setup, or application of external force). As explained above, the plaintiff's case then showed circumstantially that no nonhuman agent was the sole cause for the ladder to fall over, that Dalco had been in control of the ladder before this day and made the defective repair, that Dalco was in control of the ladder that day, and hence that the ladder would not have fallen over but for Dalco's negligence.

Their second assertion is that "direct evidence was offered through the plaintiff's liability expert that the sole proximate cause of the ladder's fall could have been the 11.5 m.p.h. wind blowing at the site ···" *Id.* The expert also testified that the winds that day could not have caused a properly setup ladder in good condition to fall over. The defendants thus ask the court to construe the expert's evidence "in a light most favorable to the defense-as the party against whom the expert's opinion was called to testify," (Mem. in support of

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(Transcript, 2/3/04, 106.) Although defendants at that hearing complained about their inability at that time to retain an expert, they did not later request a continuance to retain an expert after that subsequent deposition of Strauss.

Motion to Set Aside, 10), but, as explained above, such is not the law. *Boretti v. Panacea Co.*, 67 Conn.App. 223, 786 A.2d 1164 (2001) Alternatively, they claim that the expert's testimony, since it contained contradictions, should have been treated as "unreliable, irrelevant, and inadmissible." *Id.*

Allowing Strauss' "inconsistent" testimony ··· was prejudicial precisely because there was no substance to it. Allowing it without giving full weight to the direct evidence that defeated the foundation for a res ipsa loquitur charge was clear and manifest error.[13]

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[13]In *Robillard v. Asahi Chemical,* Superior Court, judicial district of Waterbury, Complex Litigation Docket No. X01 CV94-0147579 (September 14, 1999) (Hodgson, J.), a plaintiff injured in a swimming pool offered expert testimony that a blue pool liner used in the defendant's swimming pool was a defect in the pool that had caused plaintiff's injuries because it did not adequately assist a diver to recognize the bottom of the pool and its depth. The court excluded the proposed expert testimony because no causal relationship was shown between the alleged defect and the plaintiff's injury. Although acknowledging a scientific basis for the expert's testimony that a white pool liner would have provided better visibility than the blue liner used by defendant, the court held that plaintiff had shown no scientific evidence supporting the expert's claim that a difference in visual acuity would increase safety and thus precluded that portion of the expert's proposed opinion.

This case, though repeatedly cited by defendants, does not govern the present situation. Strauss did not give specific expert opinion that the defective ladder was the sole cause of plaintiff's injuries here or how the plaintiff's injuries were incurred. Throughout his testimony, Strauss repeatedly stated that he could not offer an expert opinion fixing the cause of the

(Citations omitted.) *Id.*, at 10-11. As explained above, however, the jury could reasonably have concluded that the plaintiff's testimony on direct examination was what he intended to say. And there was other evidence consistent with his testimony on direct examination about the effect of the wind speeds that day. Under the facts of this case, the inconsistencies in the expert's testimony and the credibility of his opinions were matters for the jury to assess.

E. Defendants' claim that the verdict was excessive.

"A court is empowered to set aside a jury verdict when, in the court's opinion, the verdict is contrary to the law or unsupported by the evidence ··· A verdict should not be set aside, however, where it is apparent that there was some evidence on which the jury might reasonably have reached its conclusion." *Marchell v. Whelchel,* 66 Conn.App. 547, 582, 785 A.2d 253 (2001). The verdict should be disturbed only by considerations of the most persuasive character, as where the verdict shocks the sense of justice. Only the most compelling

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accident, because he did not know how the ladder had been set up. Instead, his testimony was offered to exclude nonhuman causation as the sole cause. Although he acknowledged that he believed the defect and setup probably contributed to the accident, he clarified in follow-up questions that he could not give expert opinion that either or both were sole or contributing causes for the ladder to fall. No one moved to strike this testimony about his belief, but it was clear at trial that he was distinguishing between that belief, mentioned only briefly and near the end of lengthy testimony covering three days, and his expert opinion offered to a reasonable degree of engineering certainty.

evidence justifies setting aside a jury verdict because doing so interferes with a litigant's constitutional right to have issues of fact decided by a jury. *Hunte v. Amica Mutual Insurance Co.*, 68 Conn.App. 534, 541, 792 A.2d 132 (2002). The court must view the evidence and all the inferences drawn in the light most favorable to the prevailing party; *id.;* a standard that requires the court here to consider the evidence on damages in the light most favorable to the plaintiff.

In support of their claim that the verdict was excessive, the defendants cite three reasons. They cite no authority for their novel claim that the court should reduce the verdict because it exceeded the offer of judgment filed by the plaintiff and the value placed upon the case by another judge during pretrial settlement discussions. The court agrees with the plaintiff that purpose of the rule and statute permitting offers of judgment is to promote settlements, not bind litigants. A rule that offers of judgment place a cap on the amount of a verdict, or should be used to assess the fairness of verdicts, would discourage parties from using this mechanism. The settlement value placed on a case by a pretrial court is often a compromise amount, one that might lead a defendant to concede liability against damages and a plaintiff to reduce its claim for damages in order to reach an agreement, the very device that juries themselves are prohibited from employing.

The defendants do not brief their claim that the verdict amount was "excessive in light of the injuries claimed, the continuing improvement of the plaintiff's nerve damage [, and) ··· the absence of any claim that the plaintiff cannot earn his living." Motion to Set Aside, 5. The defendant did not challenge his claim for past medical expenses of $109,000. He was out of work for more than three years and offered

evidence showing lost and reduced wages exceeding $85,000. His doctor testified that future surgeries would cost between $22,000 and $27,000. The jury's award of $200,000 in economic damages was fully supported by the evidence.

The jury also awarded plaintiff one million damages in non-economic damages. The evidence here showed that the defendant suffered severe injuries that completely changed his life. He testified that he suffers from daily pain, testimony that the medical evidence supported. To his credit, though unable to perform his old job, he has found a new vocation. But the activities of his daily life that characterized the lifestyle that he enjoyed with his fiance are now completely foreclosed to him. On the state of this record, the court cannot find that the verdict shocks the conscience or the court's sense of justice.

IV.CONCLUSION

For the reasons stated above, the defendants' motion to set aside the verdict is therefore denied.